

CASSETTE RECEIVER

# KRC-202/222/302/332 /402/442 SERVICE MANUAL

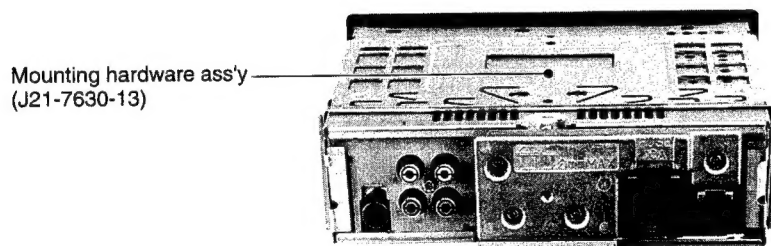
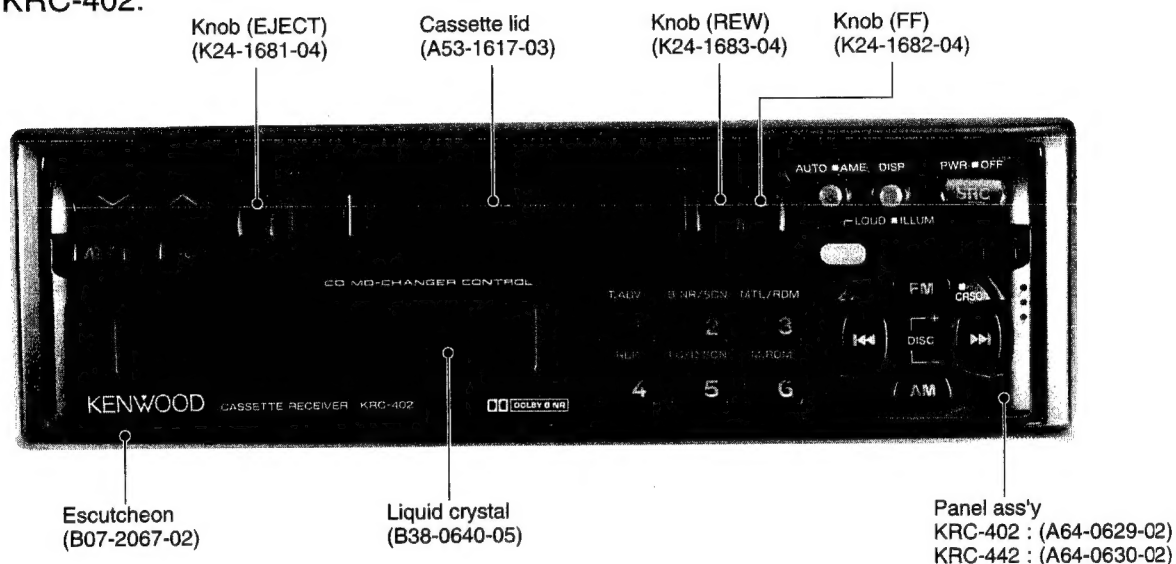
# KENWOOD

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B51-6926-00 (K) 1788

The MECHANISM OPERATION DESCRIPTION is the same as model KRC-401/441.  
Please refer to the service manual for model KRC-401/441 (B51-6791-00). *4343*

## KRC-402/442

Photo is KRC-402.



Screw set  
(N99-1610-15)

Screw set  
(N99-1632-05)

Lever  
(D10-3031-04)

Stay  
(J54-0071-04)

Plastic cabinet ass'y  
(A02-1443-03)

DC cord  
KRC-402 : (E30-4316-05)  
KRC-442 : (E30-4317-05)

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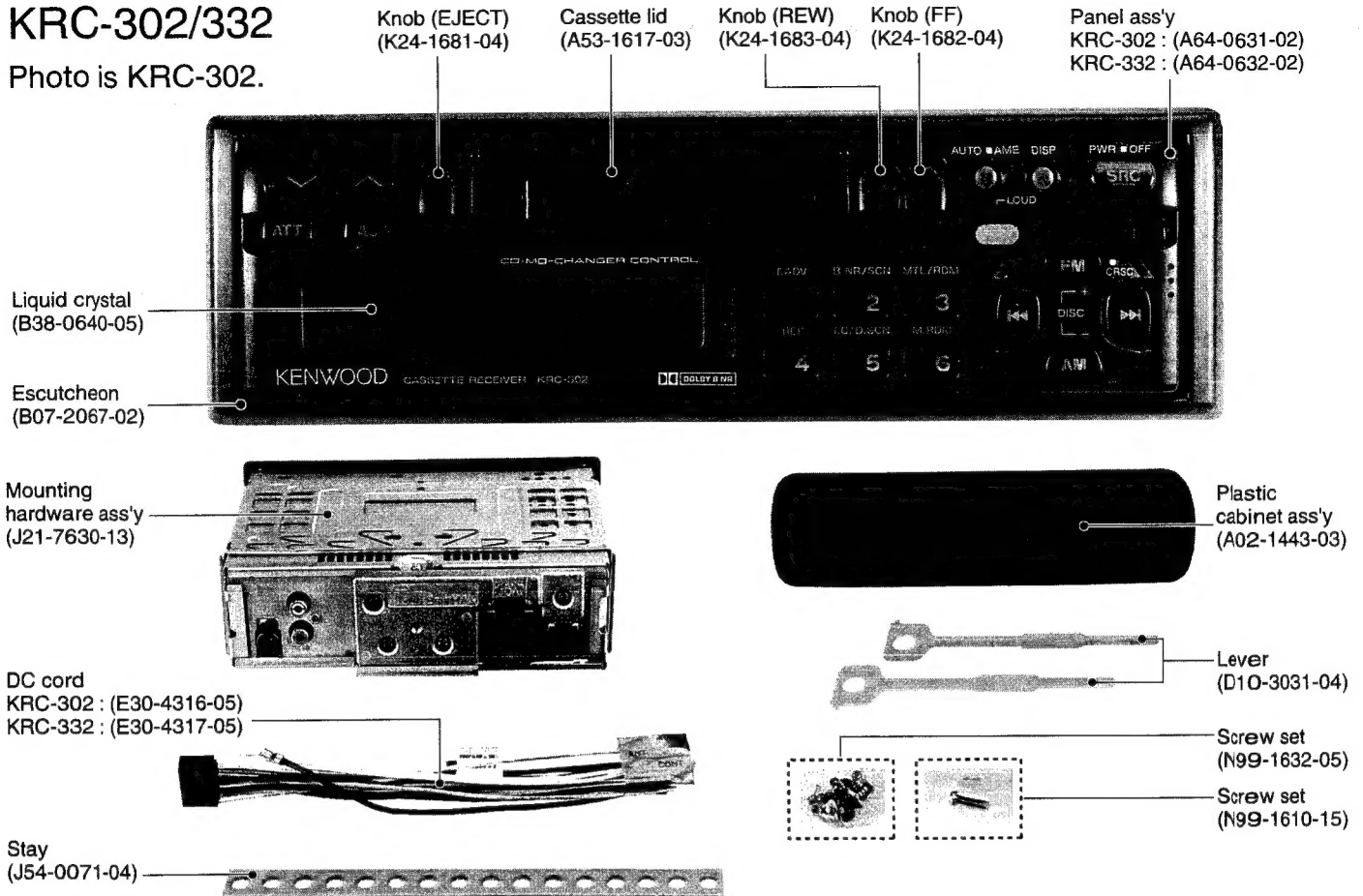
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# KRC-202/222/302/332/402/442

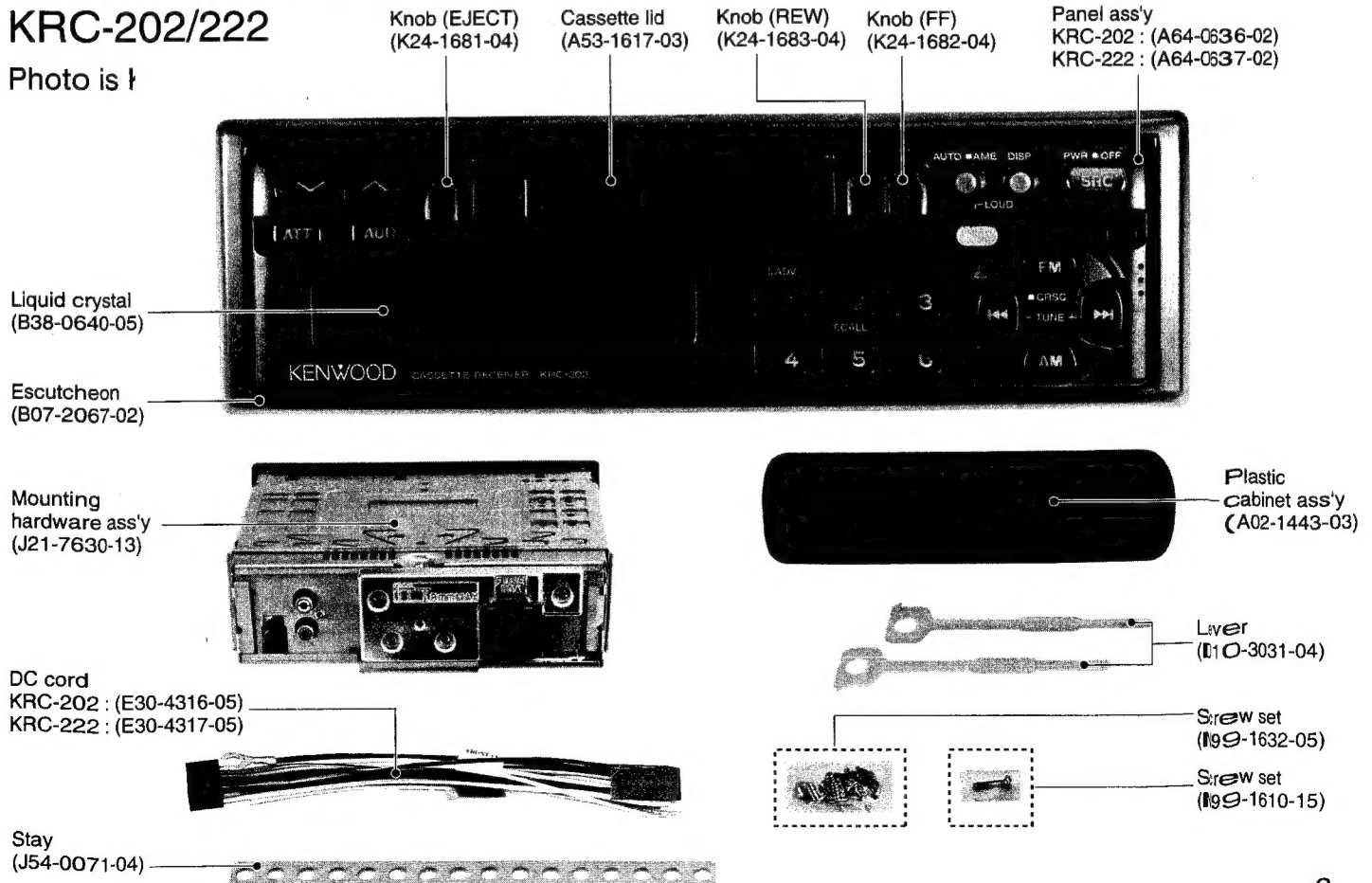
## KRC-302/332

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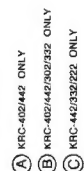


## KRC-202/222

Photo is KRC-202.



## BLOCK DIAGRAM



## CIRCUIT DESCRIPTION

## SYNTHESIZER UNIT (X14 - 5400 -XX)

Ref. No.	Use and Function	Operation and Condition
IC1	μ-COM IC	
IC2	ELECTRONIC VOLUME	EQ amp/Electronic VOL/NC MPX/CH ISO/T.ADV/METAL/BASS/TRE
IC3	POWER SUPPLY IC	
IC4	PWR IC	
IC5	DOLBY IC	
Q6	CRSC SW	μ-COM pin (60).
Q7	METAL SW	ON when μ-COM (53) goes H.
Q8	IC2 MUTE SW	ON when μ-COM (17) goes L.
Q101	PWR ON SW	ON when μ-COM (58) goes L.
Q102	L.P.F.	
Q103	MUTE SW	ON when μ-COM (17) goes L.
Q104	DSI SW	ON when μ-COM (26) goes H.
Q105	PANEL VDD SW	ON when μ-COM (45) goes L.
Q106,107	2-COLOR SW	ON when μ-COM (24) (25) go H.
Q108,109	ILLUM +B SW	Q108 is turned ON when Q106 goes ON. Q109 is turned ON when Q107 goes ON.
Q110	MOTOR SW	ON when μ-COM (22) goes H.
Q111	PLUNGER SW	ON when μ-COM (21) goes H.
Q112	MOTOR +B DRIVER	When Q110 goes ON, Q112 is turned ON and mechanism motor starts rotation.
Q113	PLUNGER +B DRIVER	ON when Q111 goes ON.
Q114	ILLUM +B DRIVER	When Q115 goes ON, Q114 is turned ON and illumination power is supplied
Q115	ILLUM SW	ON when μ-COM (59) opens to turn Power supply IC (3) ON.
Q116	PWR ANT SW	ON When μ-COM (18) goes H.
Q117	PWR ANT +B DRIVER	When Q116 goes ON, Q117 is turned ON and power is supplied to power antenna.
Q118	B-UP DETECT SW	ON when B-UP is detected.
Q119	SURGE DETECT SW	ON when Power supply IC (11) goes L.
Q120	HOLD DETECT SW	ON when μ-COM (67) goes L.
Q121	HOLD SW	ON when Q118 goes ON. Puts μ-COM in HOLD mode.
Q125	SVR CONTROL	ON when Q126 is turned ON by μ-COM (16) going L.
Q126	SVR SW	ON when μ-COM (16) goes L.
Q127	AMP STBY SW	ON when Q118 is turned OFF by power down. Both AMP STBY and AMP MUTE go L.
Q201~204	PRE MUTE SW	ON when μ-COM (17) goes L.
Q401	CD-CH MUTE SW	ON when CD CH MUTE goes H.
Q402	CD-CH RST SW	ON when Q403 is turned ON by pressing CH RST button.
Q403	CD-CH RST SW	ON when CH RST button is pressed.

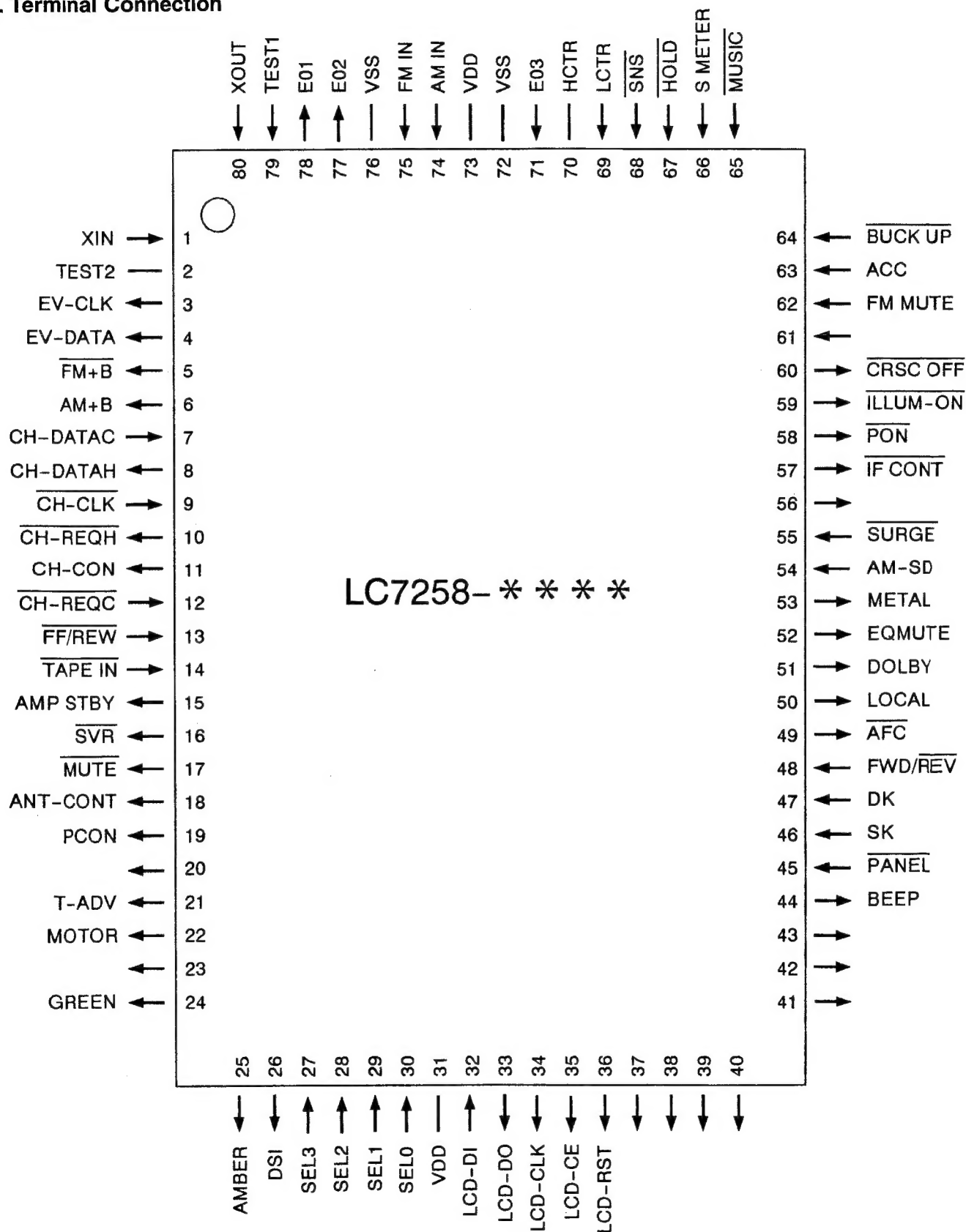
# KRC-202/222/302/332/402/442

## CIRCUIT DESCRIPTION

IC1 : LC72358-9202 (X14-5400-XX)

Microcomputer

### 1. Terminal Connection



## CIRCUIT DESCRIPTION

## 2. Terminal description

No.	Pin Name	I/O	Function	Description	In HOLD mode
3	SI0/PG3	O	EV-CLK	Electronic volume control - Clock line.	L
4	SO0/PG2	O	EV-DATA	Electronic volume control - Data line.	L
5	SCK0/PG1	O	FM+B	FM power control.	L
6	PG0	O	AM+B	AM power control.	L
7	SI1/PF3	I	CH-DATAC	Changer data input.	-
8	SO1/PF2	O	CH-DATAH	Changer data output.	Last state
9	SCK1/PF1	I	CH-CLK	Changer clock input.	-
10	PF0	O	CH-REQH	Changer request output.	H
11	SI2/PE3	O	CH-CON	Changer control.	L
12	SO2/PE2	I	CH-REQC	Changer request input.	-
13	SCK2/PE1	I	FF/REW	Tape - FF/REW detection. "L" = FF/REW.	-
14	PE0	I	TAPE in	Tape - Tape input. "L" = Tape mode.	-
15	PD3	O	AMP STBY	Standby output to power amplifier.	L
16	PD2	O	SVR	Power amp muting output. "H" = Muting H in 15 sec.	
17	PD1	O	MUTE	Audio muting output. "L" = Muting. H in 15 sec.	
18	PD0	O	ANT-CONT	Tuner antenna control. "H" = Tuner mode.	L
19	PC3	O	PCON	Power control "H" = ON.	L
20	PC2	O			L
21	PC1	O	T-ADV	Tape advance plunger output. "H" = ON.	L
22	PC0	O	MOTOR	Tape motor ON output "H" = ON.	L
23	PB3	O			
24	PB2	O	GREEN	Illumination - amber. "H" = ON.	L
25	PB1	O	AMBER	Illumination - green. "H" = ON.	L
26	PB0	O	DSI	DSI "H" = ON.	L
27	PA3	I	SEL3	Destination type selection terminal. With pull - down resistor.	L
28	PA2	I	SEL2	Destination type selection terminal. With pull - down resistor.	L
29	PA1	I	SEL1	Destination type selection terminal. With pull - down resistor.	L
30	PA0	I	SEL0	Destination type selection terminal. With pull - down resistor.	L
31	Vdd	I	Vdd		
32	PQ0	I	LCD-DI	LCD driver - Data input.	.
33	PP3	O	LCD-DO	LCD driver - Data output.	L
34	PP2	O	LCD-CLK	LCD driver - Clock output.	L
35	PP1	O	LCD-CE	LCD driver - Chip Enable output.	L
36	PP0	O	LCD-RST	LCD driver - Reset output.	L
37	PO3	O			L
38	PO2	O			L
39	PO1	O			L
40	PO0	O			L
41	PN3	O			L
42	PN2	O			L
43	PN1	O			L
44	PN0/BEEP	O	BEEP	Beep output (2.08 kHz).	L
45	PM3	I	PANEL	Panel detection. "L" = Panel detected.	.
46	PM2	I	SK	SK input. "H" = ON.	.
47	PM1	I	DK	DK input. "H" = ON.	.
48	PM0	I	FWD/REV	Tape - FWD/REV input. "H" = FWD.	.
49	PL3	O	AFC	Tuner - AFC output. "L" = During seek.	L
50	PL2	O	LOCAL	Tuner - Local output. "H" = During seek.	L
51	PL1	O	DOLBY	Tape - Dolby output. "H" = ON.	L

## CIRCUIT DESCRIPTION

No.	Pin Name	I/O	Function	Description	In HOLD mode
52	PL0	O	EQMUTE	Tape - EQ muting output.	L
53	PK3	O	METAL	Tape - Metal output. "H" = ON.	L
54	PK2	I	AM-SD	AM band - SD detection. "H" = Station detected.	-
55	PK1/INT1	I	SURGE	Surge detection.	-
56	PK0.INT0	O			
57	PJ3	O	IF CONT	Tuner - IF counter ON output. "L" = ON.	OPEN
58	PJ2	O	PON	Power ON. "L" = ON. "H" in 1.15 sec.	
59	PJ1	O	ILLMI-ON	Illumination ON. "OPEN" = ON.	OPEN
60	PJ0	O	CRSC OFF	CRSC ON/OFF. "L" = OFF.	OPEN
61	PI1/ADI5	I			L
62	PI0/ADI4	I	FM MUTE	"L" = when a station is detected in FM band. Vth = 1.2V.	-
63	PH3/ADI3	I	ACC	Acc detection. "H" = ON.	-
64	PH2/ADI2	I	BUCK UP	Back-up detection. "L" = Power down. Recovery with I.	-
65	PH1/ADI1	I	MUSIC	Music detection. "L" = Music detected.	
66	PH0/ADI0	I	S Meter	FM band station detection. "H" = Station detected.	-
67	HOLD	I	HOLD	Hold detection. "L" = Hold.	-
68	SNS	I	SNS	Power down detection.	-
69	LCTR	I	LCTR	IF counter input.	-
70	HCTR	-	HCTR	-	
71	EO3	I	EO3	Phase detector error output. "OPEN".	-
72	SUB PD	-	Vss	Connected to GND.	
73	Vdd		Vdd		
74	AM in	I		VCO input.	
75	FM in			VCO input.	
76	Vss				
77	EO2			Phase detector error output. "OPEN".	
78	EO1			Phase detector error output.	
79	TEST1				
80	XOUT				
1	XIN				
2	TEST2				

	⑤FM+B	⑥AM+B
TAPE	H	L
FM	L	L
AM	H	H
CD-CH	H	L
T.CALL FM	L	L
T.CALL AM	H	H
PWR OFF	L	L



## CIRCUIT DESCRIPTION

## 3. Key matrix

\*1: Keys of K/M type models other than the KRC-402/442.

\*2: Keys of D type models. The J type model is basically identical to the D type except that T1 is used in place of SDK.

\*3: Keys of K/M type models other than the KRC-402/442.

\*4: L/N type models.

	KI1	KI2	KI3	KI4	KI5
KS6					SOURCE ⇩ POWER OFF
KS5					PANEL
KS4	*1 AUTO ⇩ A-MEMO	*1 LOUD	Radio : 6 CH : M-RDM	CLOCK	
	*2 AUTO/LOCAL ⇩ A-MEMO	*2 SDK(D) ⇩ DKVOL ADJ T1(J)			
	*3 AUTO/LOCAL ⇩ A-MEMO	*3 LOUD ⇩ ILLMI			
	*4 AUTO ⇩ A-MEMO	*4 LOUD			
KS3	DOWN	*1 FM ⇩ CRSC	*1 AM	UP	
		*2 FM ⇩ MONO	*2 AM ⇩ AT-SK.S ON/OFF		
		*3 FM ⇩ CRSC	*3 AM		
		*4 FM ⇩ MONO	*4 AM		
KS2	Radio : 3 Ta : METAL CH : RANDOM	Radio : 2 Ta : DOLBY CH : T-SCAN	Radio : 1 Ta : T-ADV	Radio : 4 CH : REPEAT	Radio : 5 Ta : T-CALL CH : D-SCAN
KS1	VOLUME ∇	VOLUME ∧	AUDIO ⇩ VOL RET	*1 ATT	
				*2 ATT (D/J) ⇩ LOUD	
				*3 ATT	
				*4 ATT	

## 4. Destination type setting

SEL3	SEL2	SEL1	SEL0	Selected model and type	SEL3	SEL2	SEL1	SEL0	Selected model and type
0	0	0	0	KRC-202	1	0	0	0	KRC-157L
0	0	0	1	KRC-302	1	0	0	1	
0	0	1	0	KRC-357L	1	0	1	0	KRC-357N
0	0	1	1	KRC-157N	1	0	1	1	KRC-332
0	1	0	0		1	1	0	0	KRC-157D
0	1	0	1	KRC-402	1	1	0	1	KRC-222
0	1	1	0		1	1	1	0	KRC-357D
0	1	1	1	KRC-442	1	1	1	1	

The M type model is switchable to a K type model.

\*In the table above, "1" means pull - up at a few ohms and "0" means OPEN (pulled down by software).

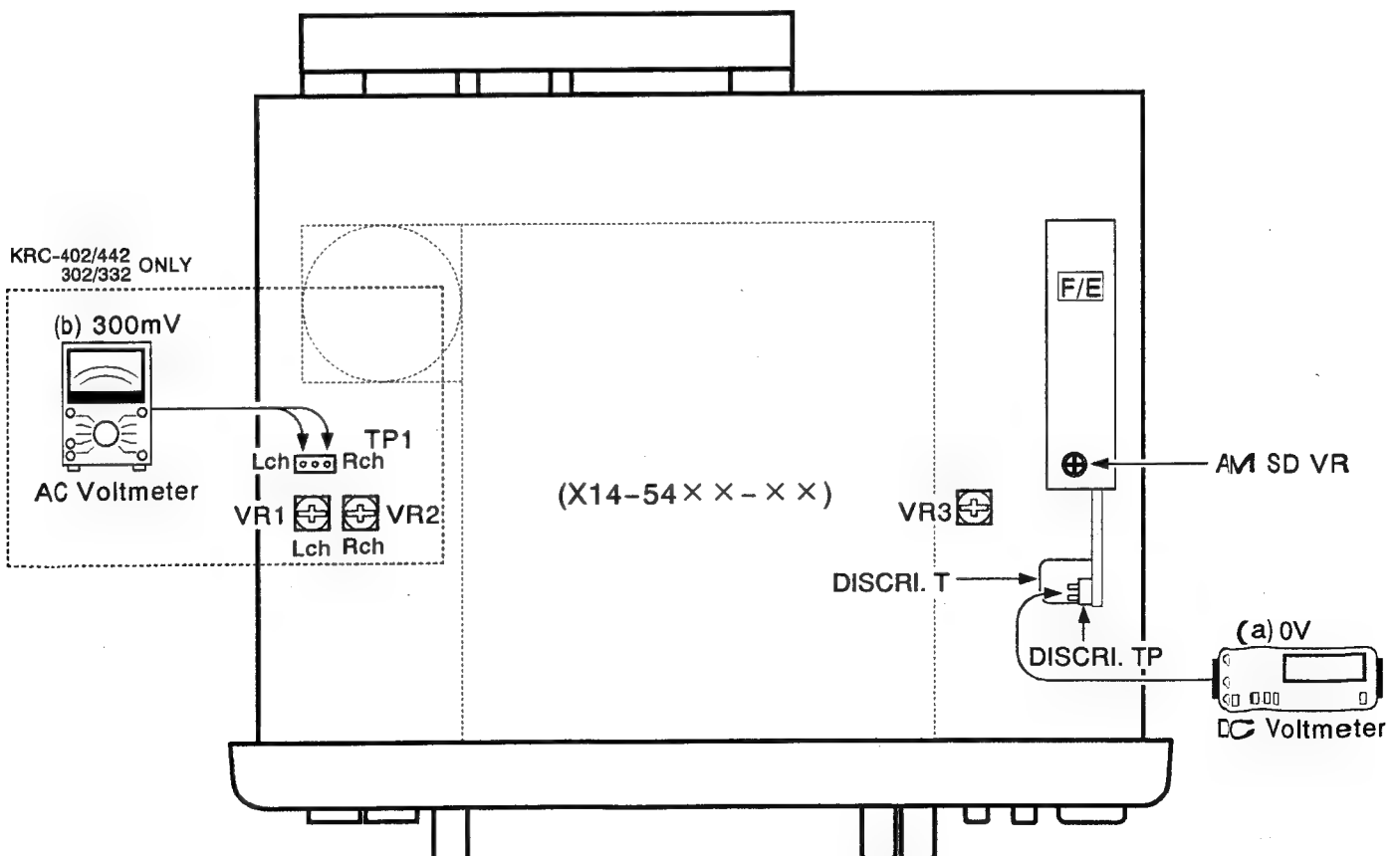
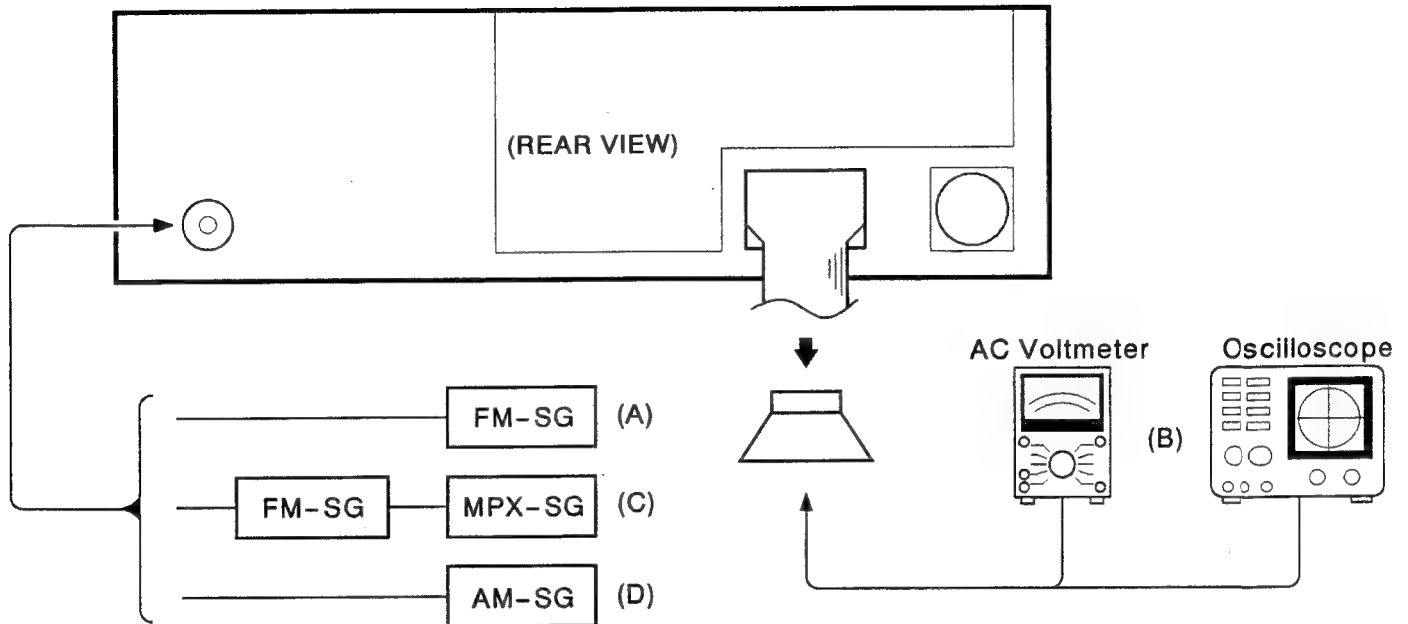
KRC-202/222/302/332/402/442

## ADJUSTMENT

No	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER (RECEIVER)	ALIGNMENT POINTS	ALIGN FOR	FIG.
<b>FM SECTION</b>							
1	DISCRI- MINATOR	(A) 98.1MHz 0dev 60dB $\mu$ (ANT input)	Connect a DC voltmeter to TP(F/E)	FM 98.1MHz	T (F/E)	0V	(a)
2	ANRC (STOP LEVEL)	(C) 98.1MHz 1kHz, $\pm 67$ kHz dev Pilot: $\pm 7.5$ kHz dev Selector: L or R 35dB $\mu$ (ANT input)	(B)	FM 98.1MHz	VR3	Separation 10dB	
<b>AM SECTION</b>							
(1)	STOP LEVEL	(D) 990 KHz 400Hz, 30% mod 35dB $\mu$ (ANT input)	—	AM 990 kHz	VR (F/E)	STOP	
<b>CASSETTE DECK SECTION</b>							
[1]	AZIMUTH	MTT-114 10kHz	(B)	TAPE PLAY	Head Azimuth Screw	Adjust the azimuth for each L ch / R ch or FWD / RVS becomes maximum	
<b>KRC-402/443/302/332 ONLY</b>							
[2]	PLAYBACK LEVEL	MTT-150	Connect a AC voltmeter to TP1	TAPE PLAY	VR1 (L) VR2 (R)	300mV	(b)

# KRC-202/222/302/332/402/442

## ADJUSTMENT

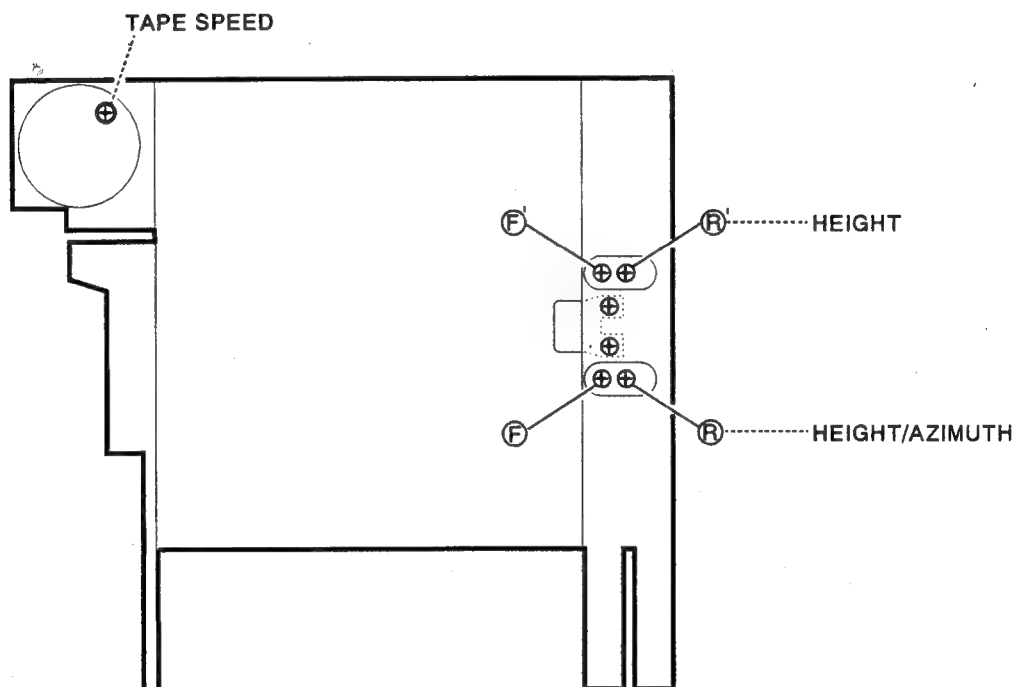
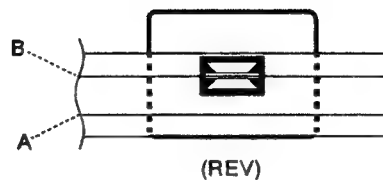
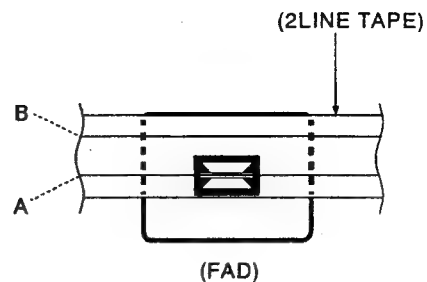


## ADJUSTMENT

### Head Angle Adjustment

#### Head height alignment procedure

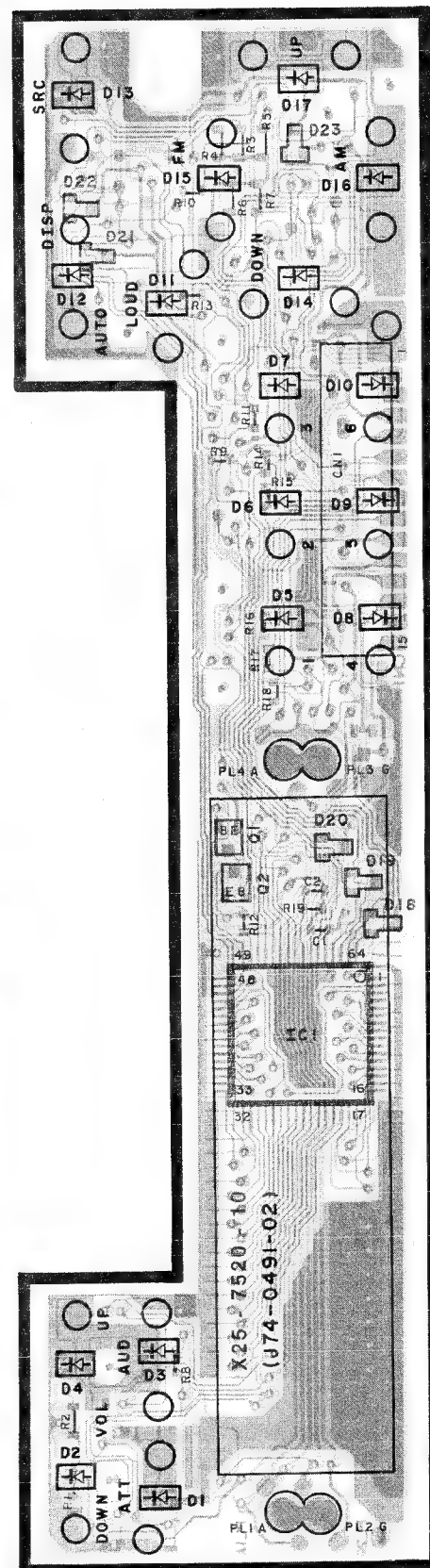
- During FWD transport, adjust screws (F) and (F') so that line A of 2-line tape passes through the center of the head shield plate (white section).
- During REV transport, adjust screws (R) and (R') so that line B of 2-line tape passes through the center of the head shield plate (white section).
- After the alignment above, reverse the transport direction and check the FWD alignment again. If it is deviated, perform alignment again. (Tape used: SCC-1659, manufactured by A-BEX).



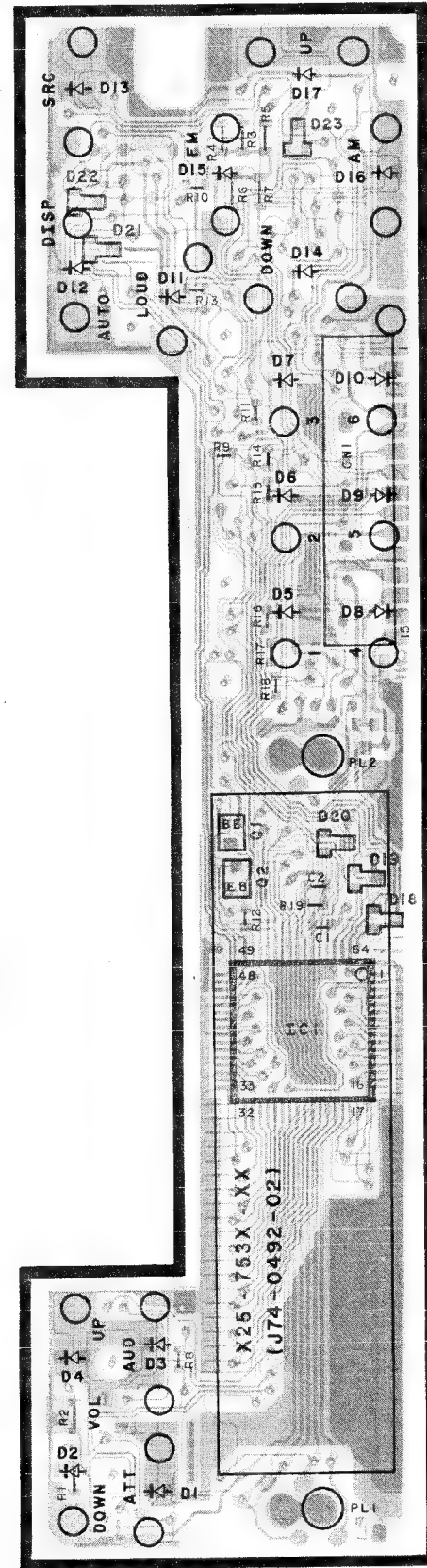
### PC BOARD (Component side view)

**SWITCH UNIT (X25-75XX-XX)**

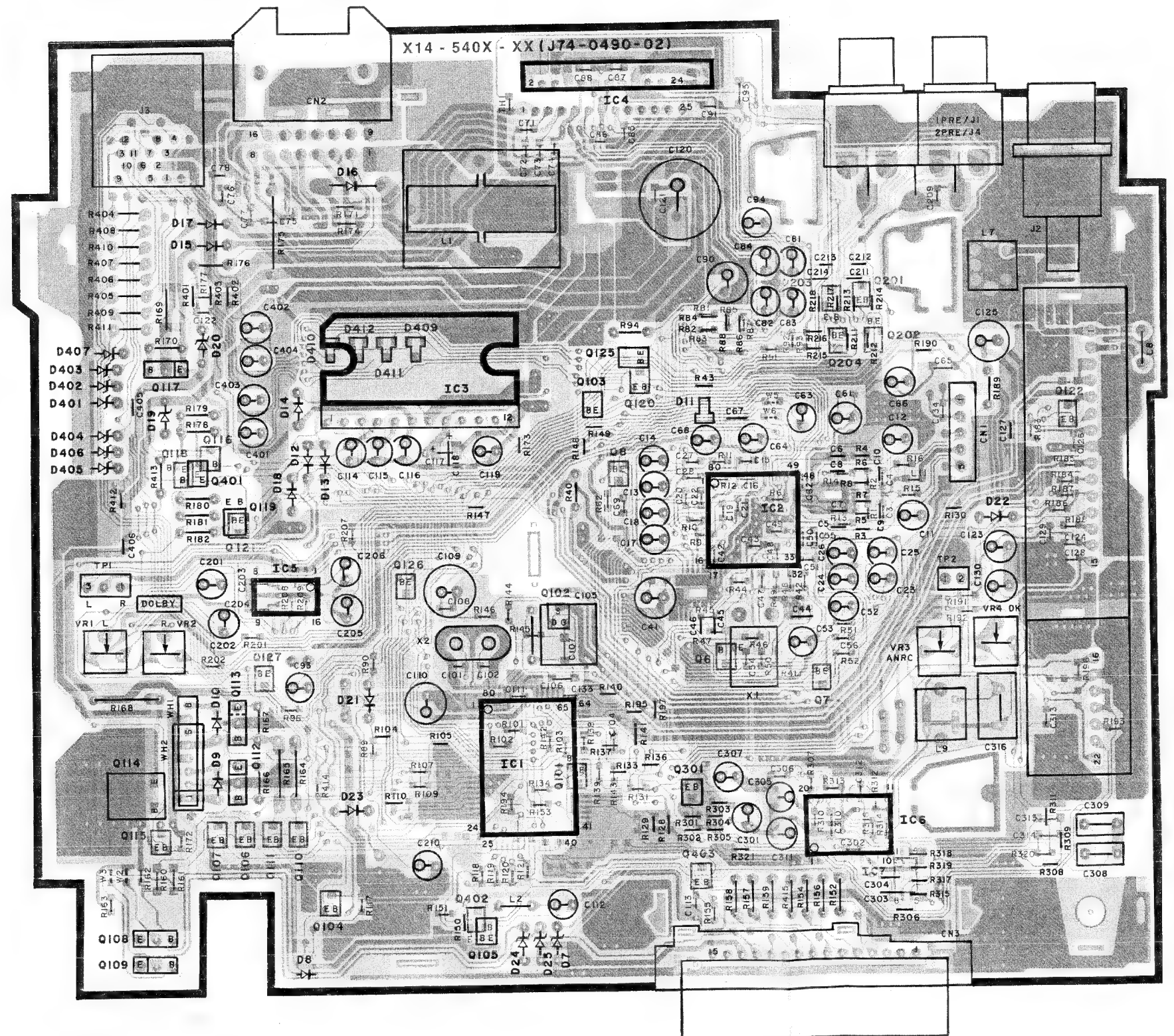
- KRC-402/442



**KRC-202/222/302/332**



SYNTHESIZER UNIT (X14-5400-XX)



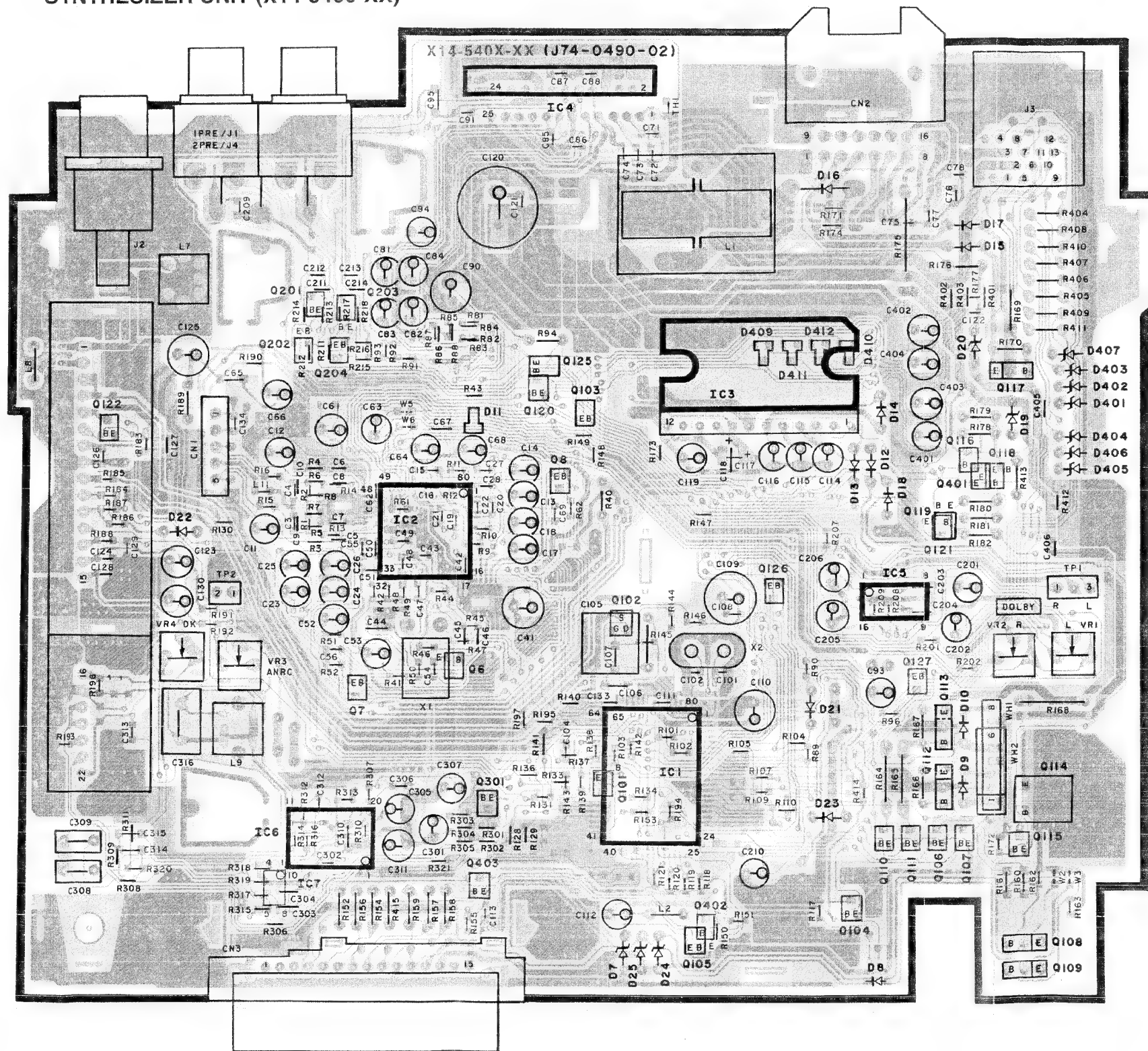
(X14-5400-XX)

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# PC BOARD (Foil side view)

## SYNTHESIZER UNIT (X14-5400-XX)



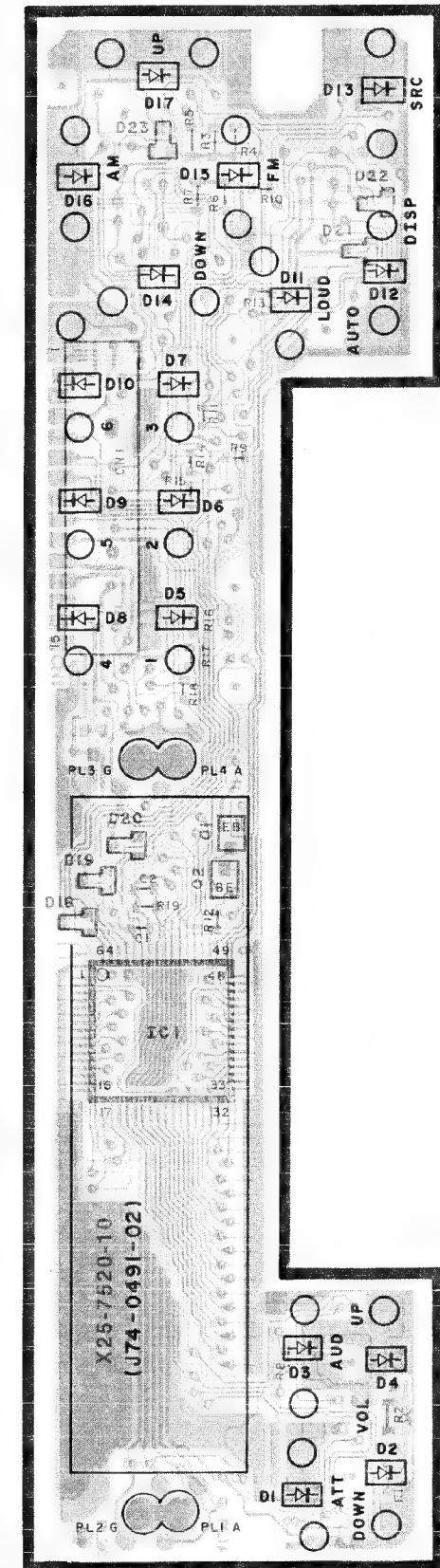
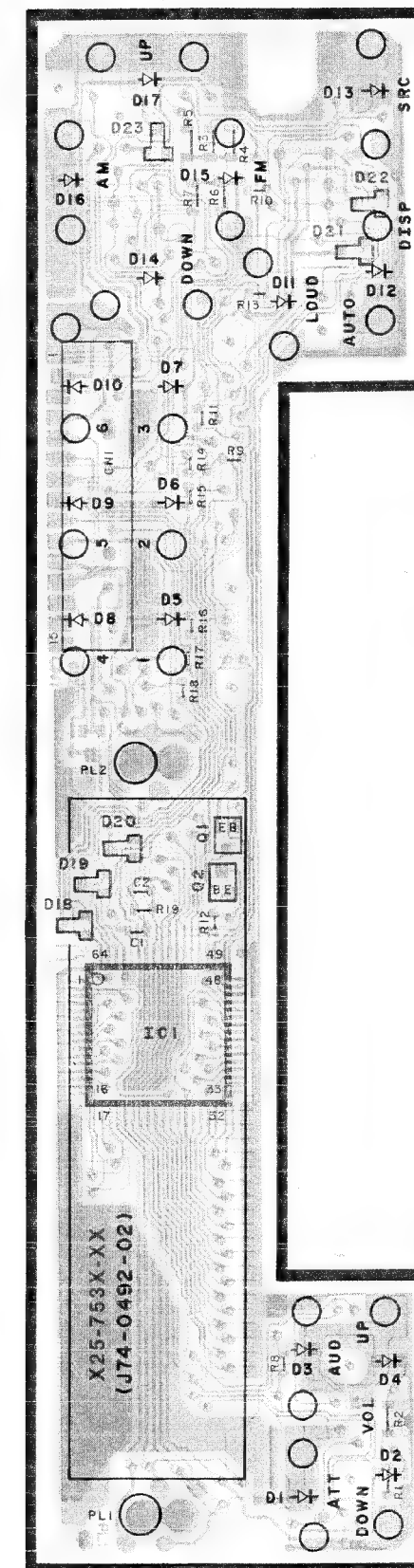
(X14-5400-XX)

Ref.No.	IC	1	2	3	4	5	6	7																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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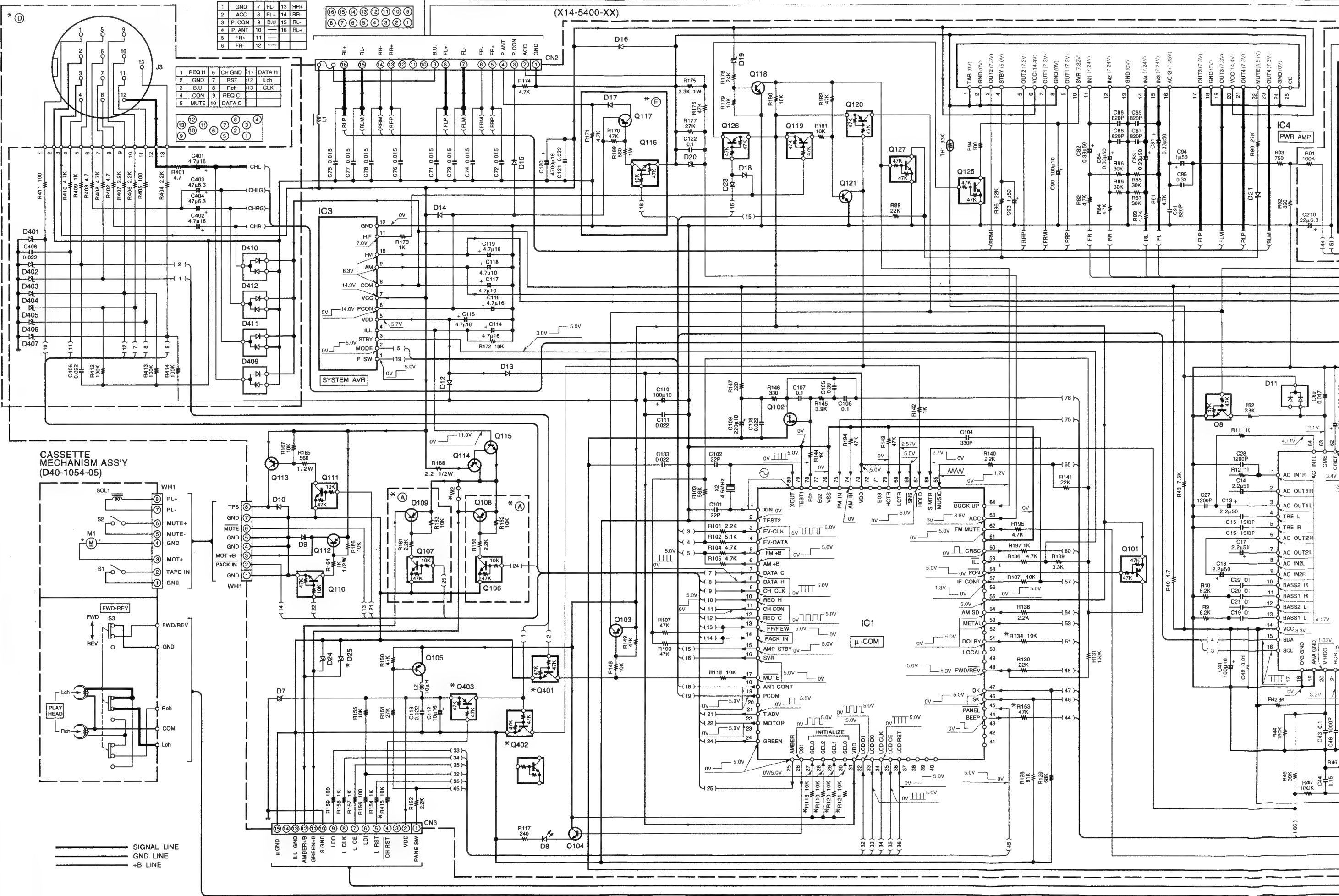
## SWITCH UNIT (X25-75XX-XX)

KRC-202/222/302/332

KRC-402/442



Refer to the schematic diagram for the value of resistors and capacitors.



CASSETTE MECHANISM ASS'Y (D40-1054-05)

(X14-5400-XX)

IC4 PWR AMP

IC1 μ-COM

IC3 SYSTEM AVR

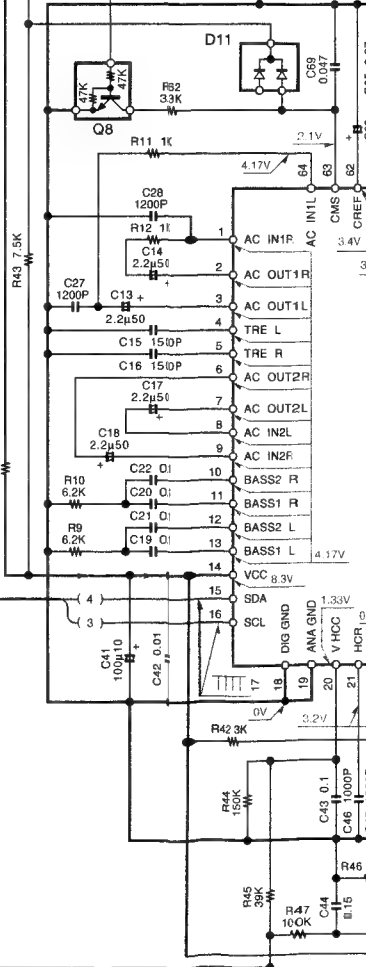
— SIGNAL LINE  
--- GND LINE  
... +B LINE

1	GND	7	FL-	13	RR+
2	ACC	8	FL+	14	RR-
3	P. CON	9	B.U	15	RL-
4	P. ANT	10		16	RL+
5	FR+	11			
6	FR-	12			

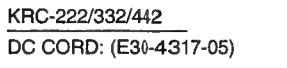
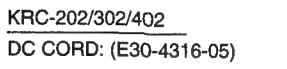
  

1	REQ H	6	CH GND	11	DATA H
2	GND	7	RST	12	Lch
3	B.U	8	Rch	13	CLK
4	CON	9	REQ C		
5	MUTE	10	DATA C		

16	15	14	13	12	11	10	9
8	7	6	5	4	3	2	1



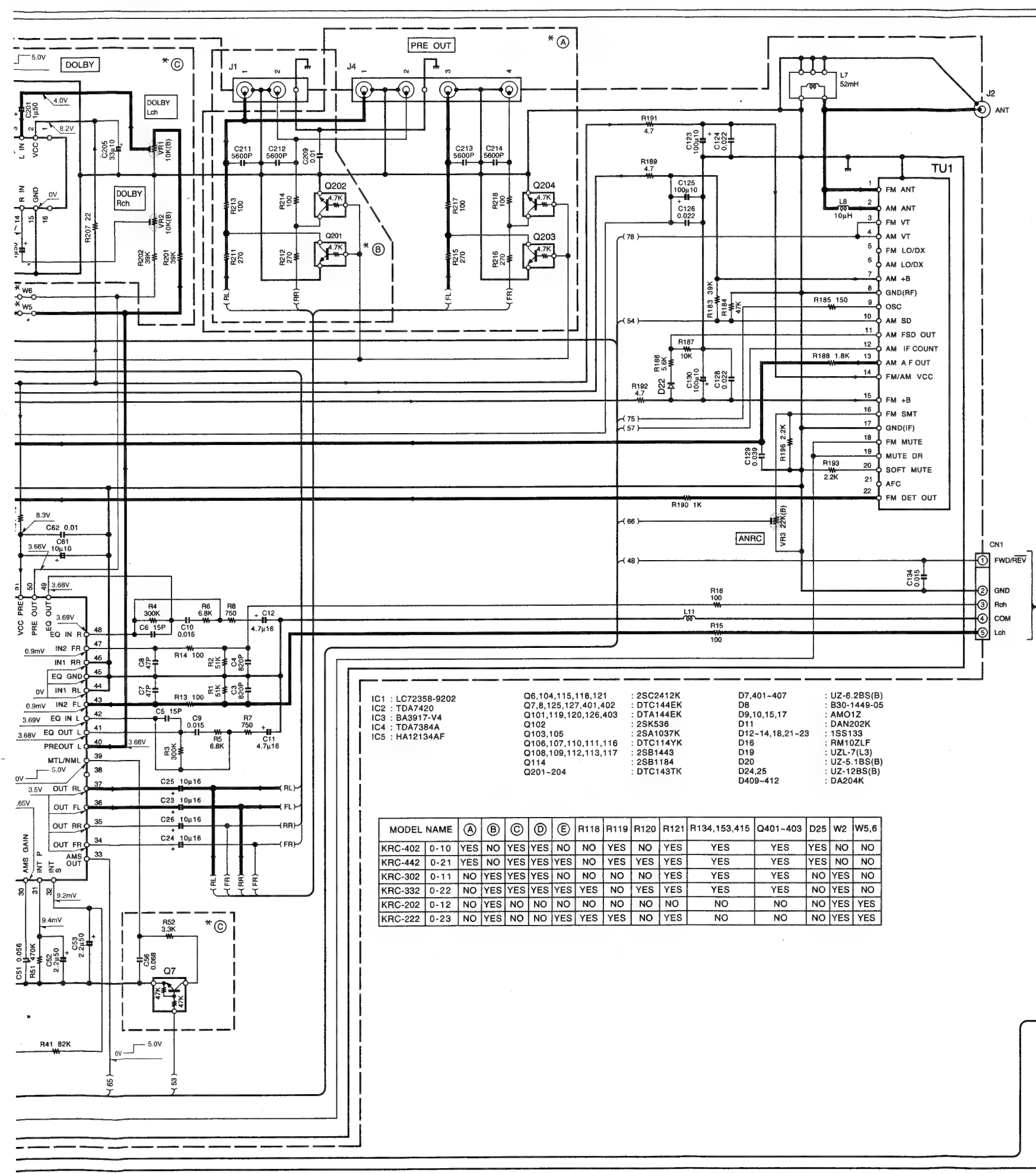




IC1 : LC72358-9202	Q6,104,115,118,121	: 2SC2412K	D7,401-407	: UZ-6.2BS(B)
IC2 : TDA7420	Q7,8,125,127,401,402	: DTC144EK	D8	: B30-1449-05
IC3 : BA3917-V4	Q101,110,120,126,403	: DTA144EK	D9,10,15,17	: AMO1Z
IC4 : TDA7384A	Q102	: 2SK536	D11	: DAN202K
IC5 : HA12134AF	Q103,105	: 2SA1037K	D12-14,18,21-23	: 1SS133
	Q106,107,110,111,116	: DTC114YK	D16	: 18M10ZLF
	Q108,109,112,113,117	: ZSB1443	D19	: UZL-7(L3)
	Q114	: ZSB1184	D20	: UZ-5.1BS(B)
	Q201-204	: DTC143TK	D24,25	: UZ-12BS(B)
			D409-412	: DA204K

KRC-402/442 (12)  
KRC-302/332 (12)  
KRC-202/222 (12)

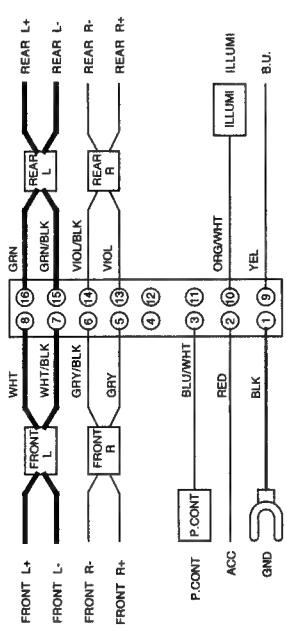




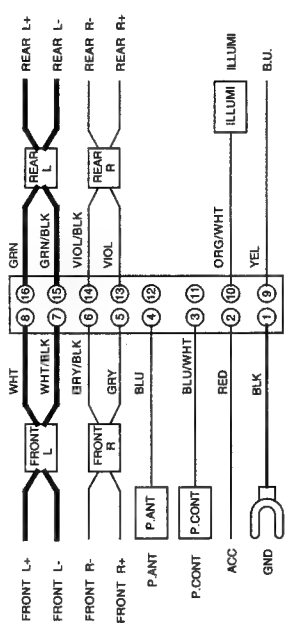
- IC1 : LC7358-9202  
 IC2 : TDA7420  
 IC3 : BA9317-V4  
 IC4 : TDA7384A  
 IC5 : HA12134AF
- Q6,104,115,118,121 : 2SC2412K  
 Q7,8,125,127,401,402 : DTC144EK  
 Q101,119,120,126,403 : DTA144EK  
 Q102 : 2SK536  
 Q103,105 : 2SA1037K  
 Q106,107,110,111,116 : DTC114YK  
 Q108,109,112,113,117 : 2SB1443  
 Q114 : 2SB1184  
 Q201-204 : DTC143TK
- D7,401-407 : UZ-6.2BS(B)  
 D8 : B30-1449-05  
 D9,10,15,17 : AMO1Z  
 D11 : DAN202K  
 D12-14,16,21-23 : 1SS133  
 D16 : RM10ZLF  
 D19 : UZL-7(L3)  
 D20 : UZ-5.1BS(B)  
 D24,25 : UZ-12BS(B)  
 D409-412 : DA204K

MODEL NAME	(A)	(B)	(C)	(D)	(E)	R118	R119	R120	R121	R134,153,415	Q401-403	D25	W2	W5,6
KRC-402	0-10	YES	NO	YES	YES	NO	YES	NO	YES	YES	YES	YES	NO	NO
KRC-442	0-21	YES	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	NO	NO
KRC-302	0-11	NO	YES	YES	YES	NO	NO	NO	YES	YES	YES	NO	YES	NO
KRC-332	0-22	NO	YES	YES	YES	YES	NO	YES	YES	YES	YES	NO	YES	NO
KRC-202	0-12	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO	YES	YES
KRC-222	0-23	NO	YES	NO	NO	YES	YES	NO	YES	NO	NO	NO	YES	YES

KRC-202/302/402  
 DC CORD: (E30-4316-05)



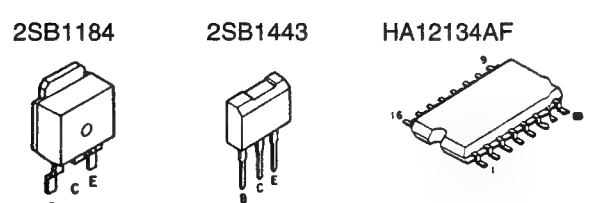
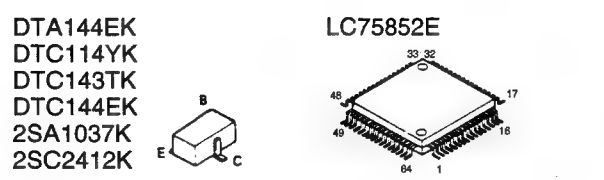
KRC-222/332/442  
 DC CORD: (E30-4317-05)



**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

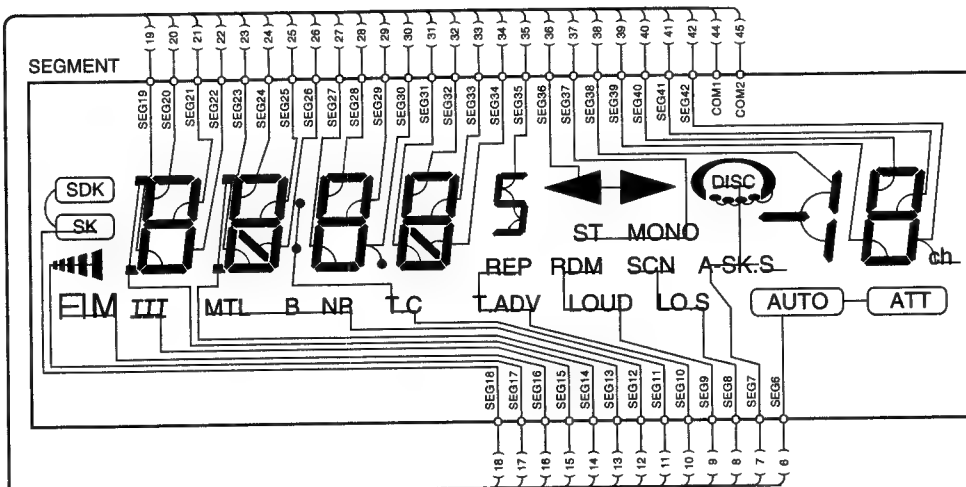
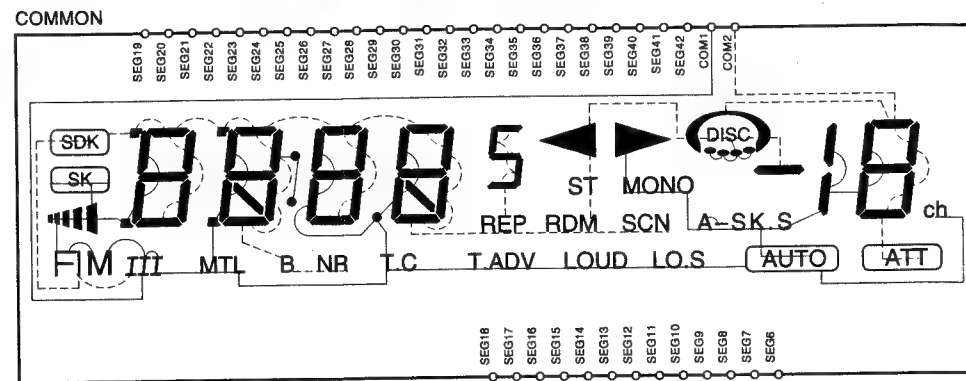
The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.



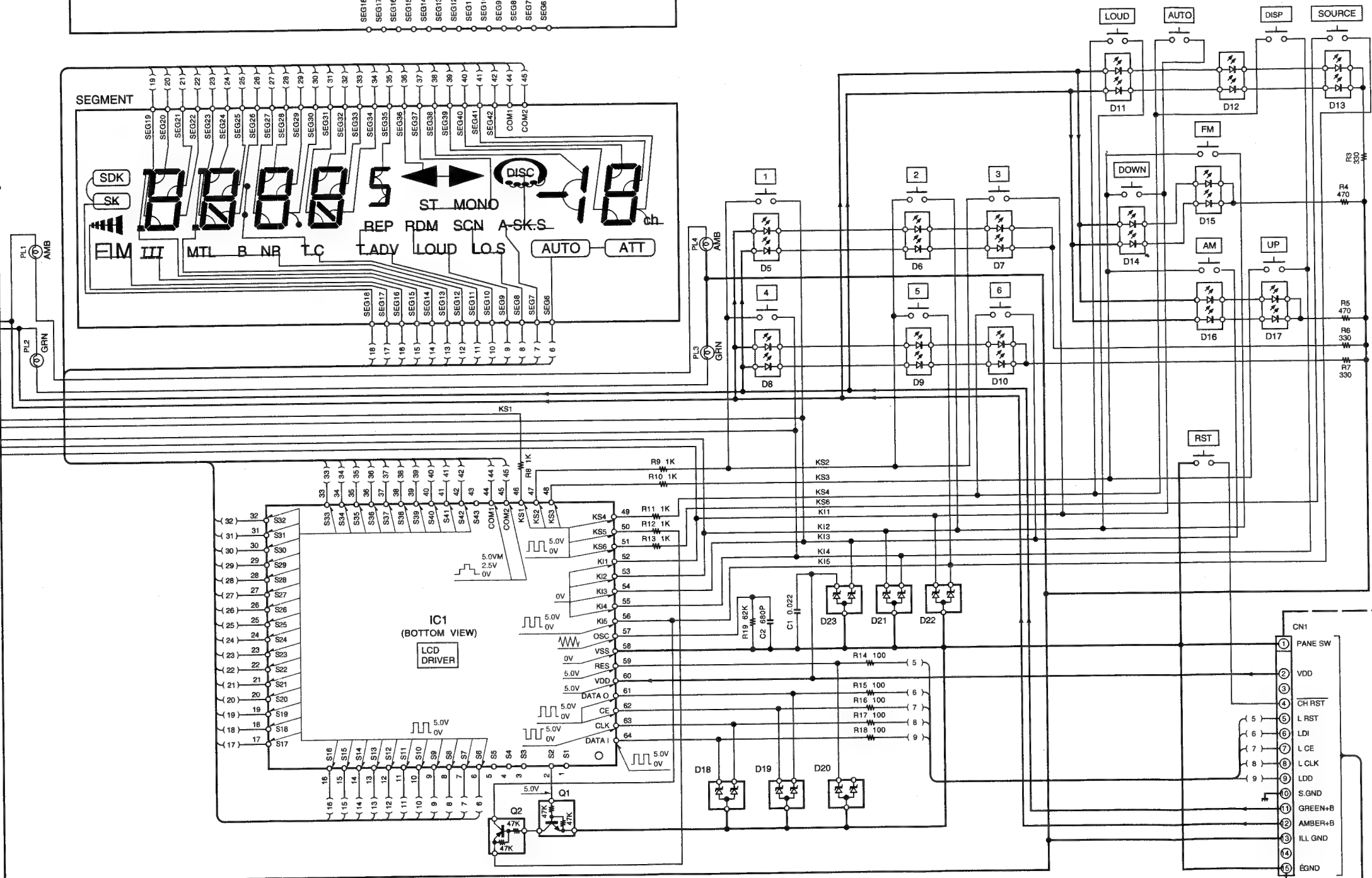
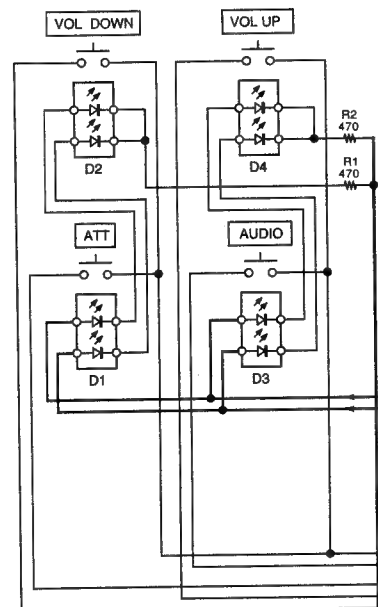
KRC-202/222/302/332/402/442

KENWOOD

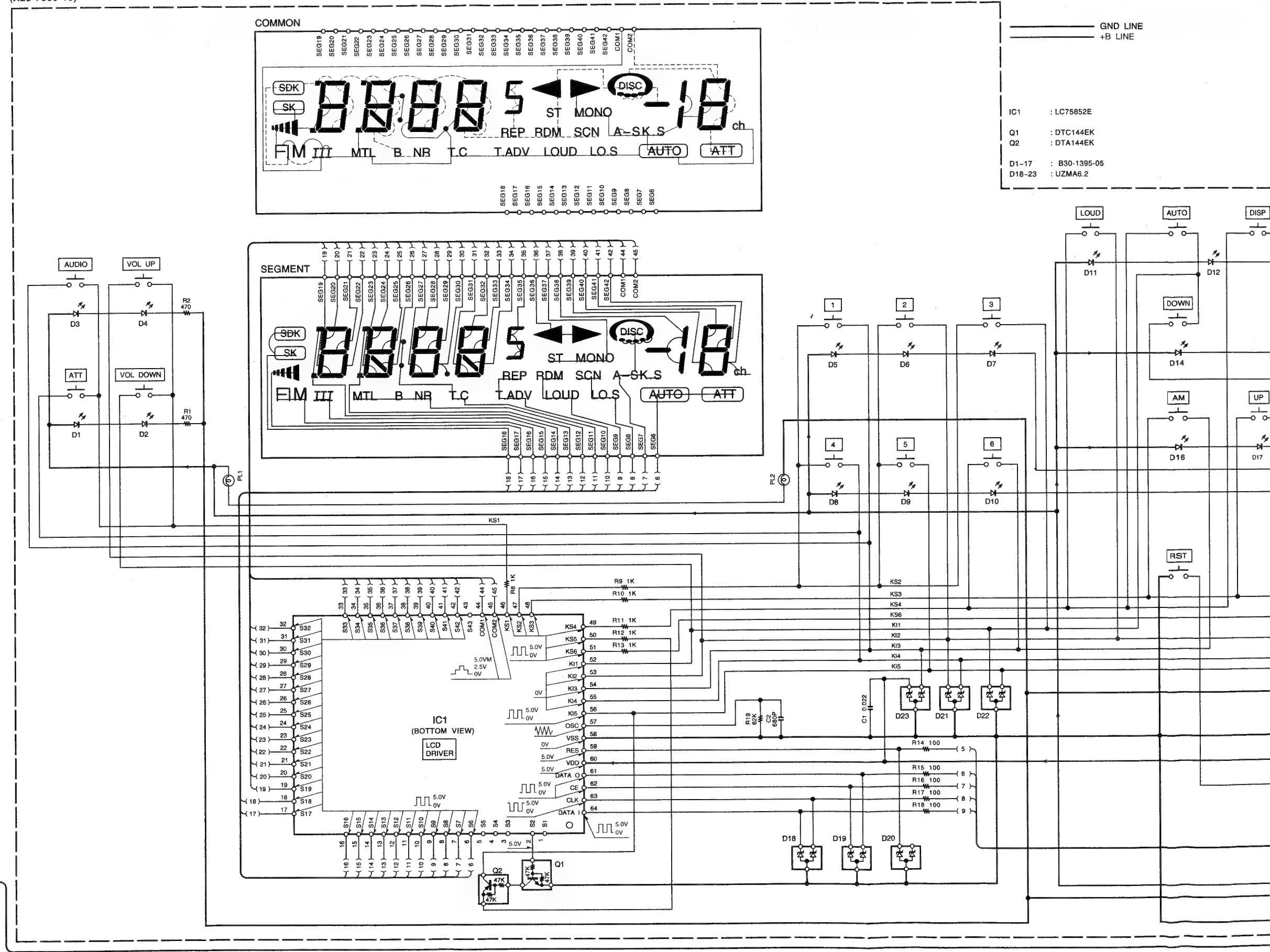
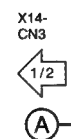


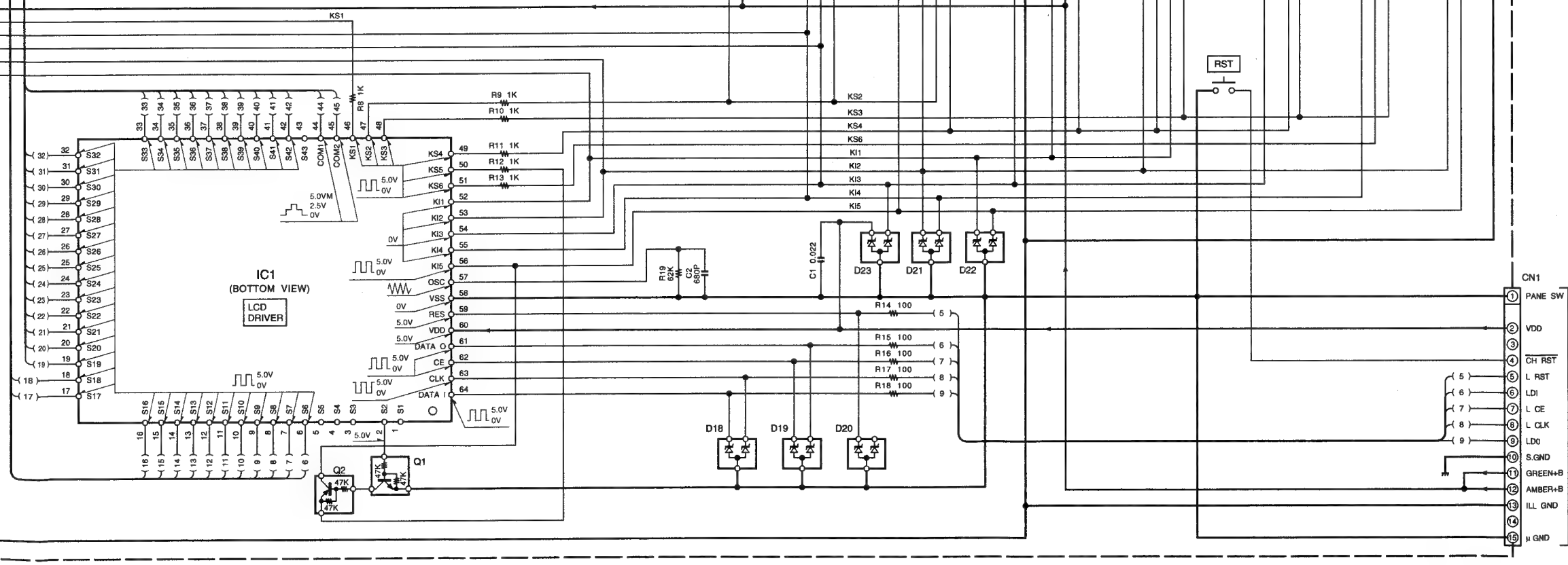
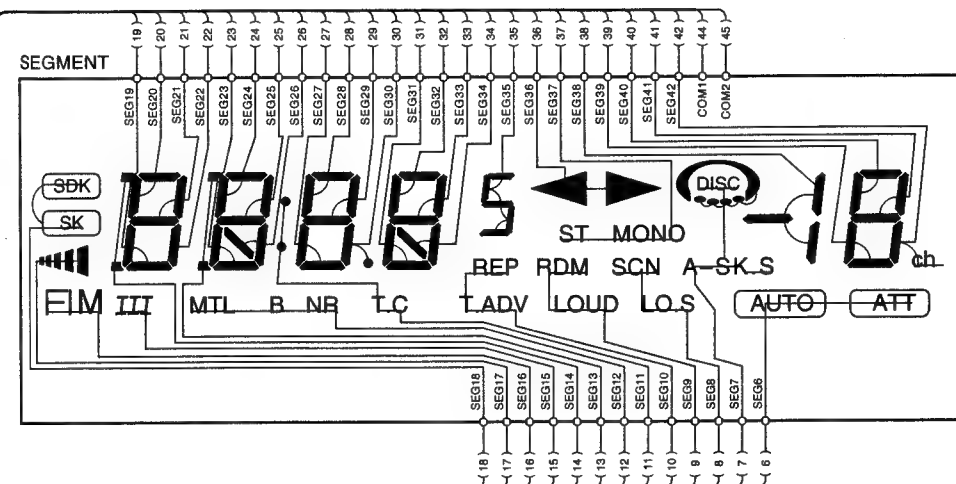
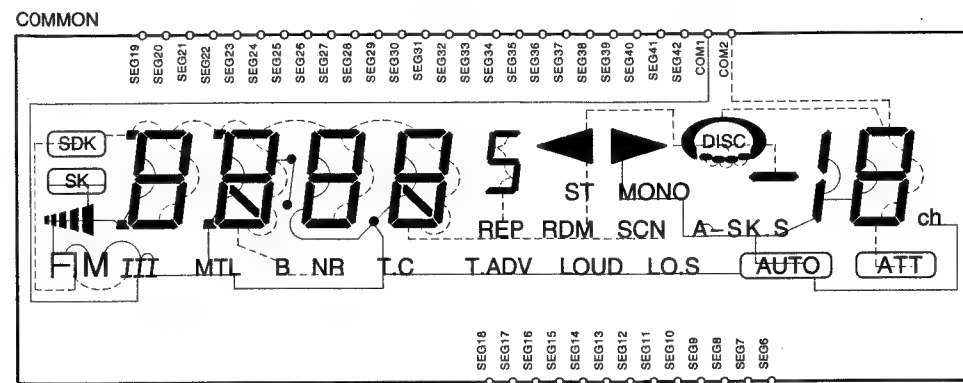
— GND LINE  
— +B LINE

IC1 : LC75852E  
Q1 : DTC144EK  
Q2 : DTA144EK  
D1-17 : B30-1349-05  
D18-23 : RD6.2Z



KRC-402/442 (2/2)





IC1 : LC75852E  
Q1 : DTC144EK  
Q2 : DTA144EK  
D1-17 : B30-1395-05  
D18-23 : UZMA6.2

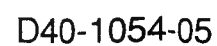
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

KRC-202/222/302/332/402/442

KENWOOD

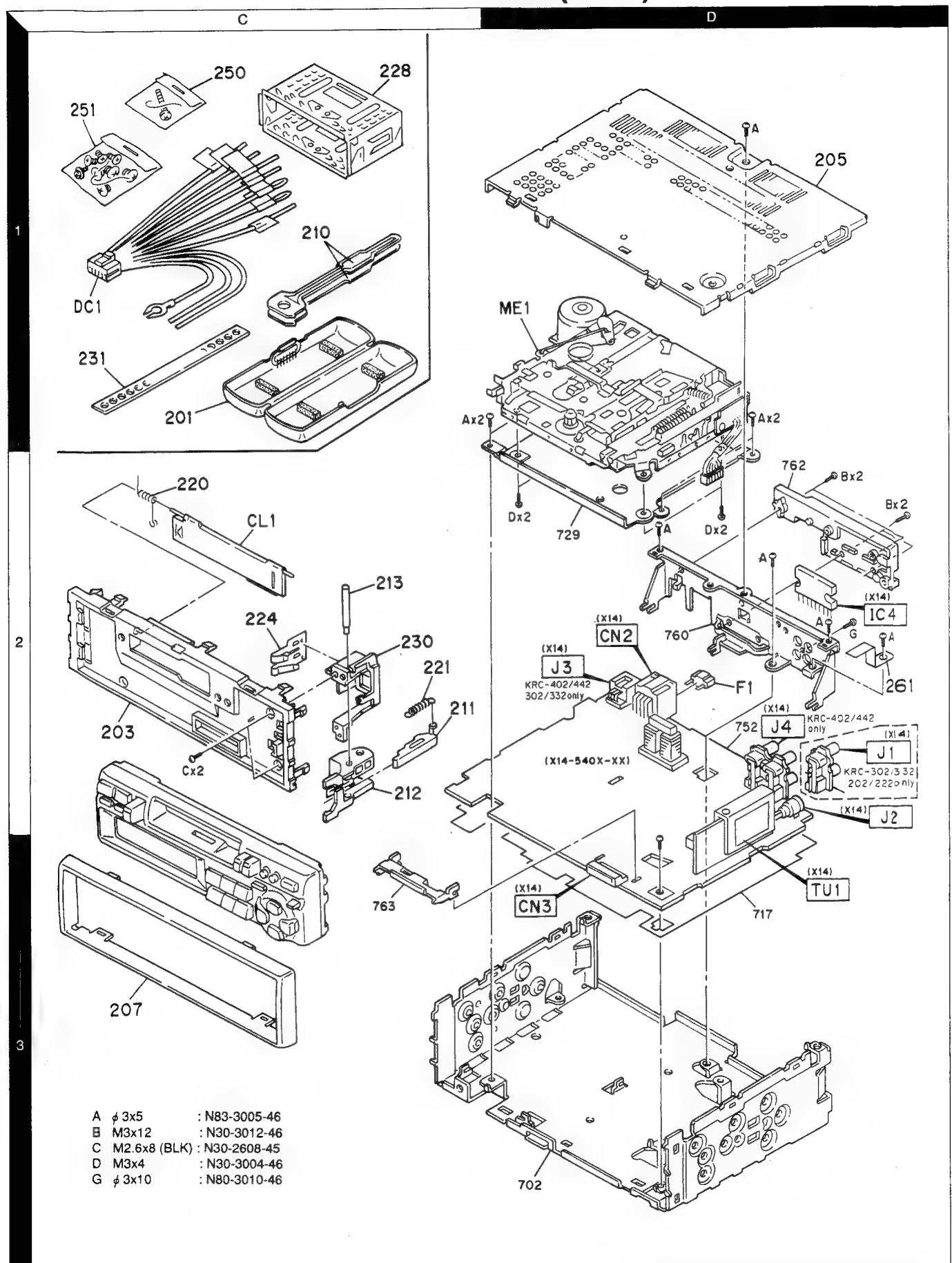
## EXPLODED VIEW (MECHANISM)



25

# KRC-202/222/302/332/402/442

## EXPLODED VIEW (UNIT)

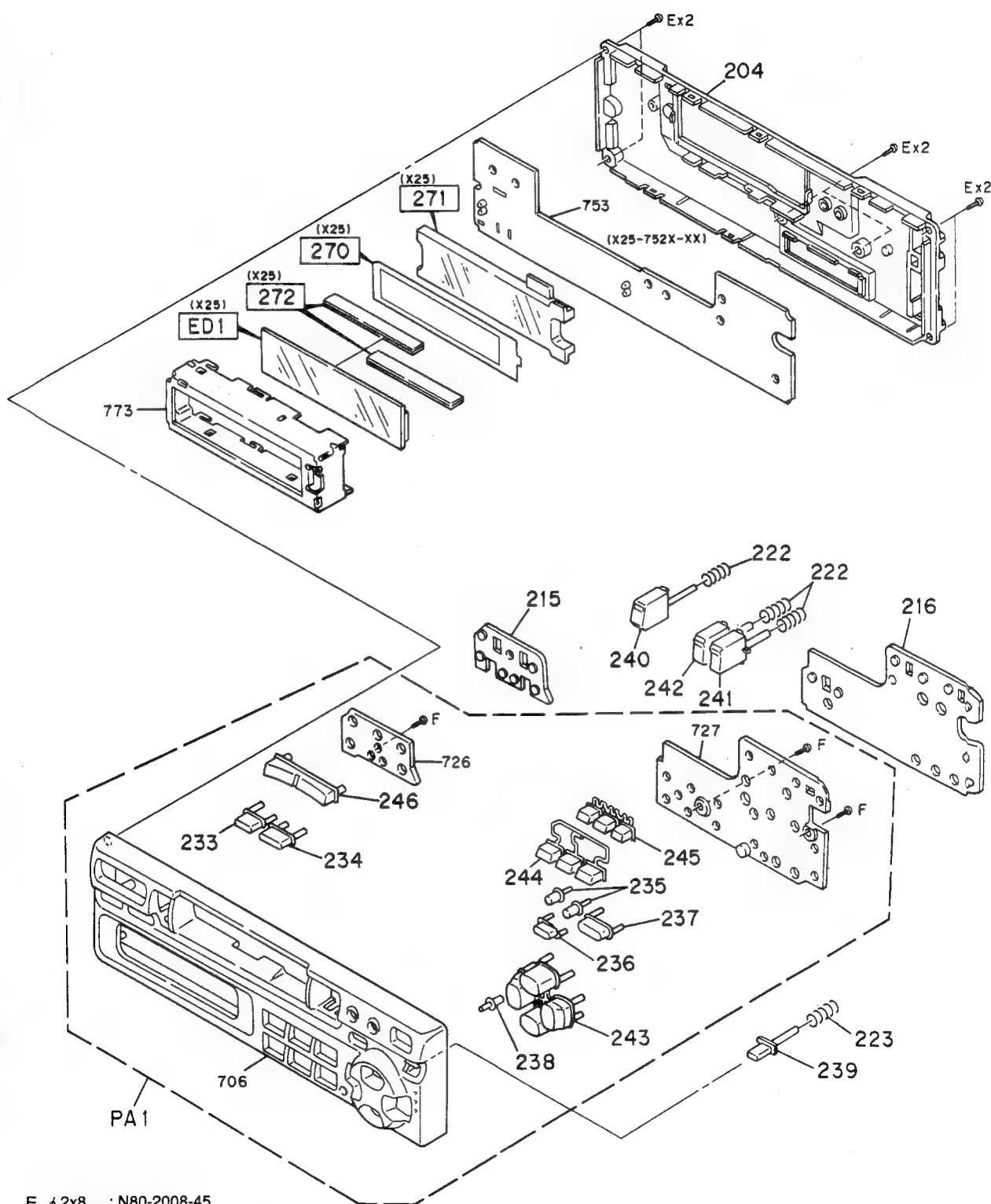


Parts with the exploded numbers larger than 700 are not supplied.



# KRC-202/222/302/332/402/442

## EXPLODED VIEW (UNIT)



E  $\phi$  2x8 : N80-2008-45  
F  $\phi$  2x6 : N80-2006-46

Parts with the exploded numbers larger than 700 are not supplied.

KRC-202/222/302/332/402/442

## PARTS LIST

\*New Parts

Parts without Part No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
<b>KRC-402/442/302/332/202/222</b>					
201	1C		A02-1443-03	PLASTIC CABINET ASSY	
203	2C	*	A22-1261-01	SUB PANEL	
204	1F	*	A46-1245-11	REAR COVER	
205	1D	*	A52-0691-02	TOP PLATE	
CL1	2C	*	A53-1617-03	CASSETTE LID	
PA1	3E	*	A64-0629-02	PANEL ASSY (402)	K
PA1	3E	*	A64-0630-02	PANEL ASSY (442)	M
PA1	3E	*	A64-0631-02	PANEL ASSY (302)	K
PA1	3E	*	A64-0632-02	PANEL ASSY (332)	M
PA1	3E	*	A64-0636-02	PANEL ASSY (202)	K
PA1	3E	*	A64-0637-02	PANEL ASSY (222)	M
207	3C		B07-2067-02	ESCUTCHEON	
-			B46-0100-40	WARRANTY CARD	
-			B46-0172-13	QUESTIONNAIRE CARD(402/302/202)	K
-			B46-0606-04	ID CARD	
-			B58-1213-04	CAUTION CARD(EIA)(402/302/202)	K
-			B58-1223-04	CAUTION CARD(CH,4W) (402/442)	
-			B58-1223-04	CAUTION CARD(CH,4W) (302/332)	
-		*	B64-0684-00	INSTRUCTION MANUAL(402/302/202)	K
-		*	B64-0685-00	INSTRUCTION MANUAL(442/332/222)	M
210	1C		D10-3031-04	LEVER	
211	2C		D10-3037-03	LEVER	
212	2C		D10-3038-03	LEVER	
213	2C		D21-2142-04	SHAFT	
ME1	1D		D40-1054-05	CASSETTE MECHANISM ASSY	
215	2F		E29-1487-04	CONDUCTIVE RUBBER	
216	2F	*	E29-1489-03	CONDUCTIVE RUBBER	
△ DC1	1C	*	E30-4316-05	DC CORD (402/302/202)	K
△ DC1	1C	*	E30-4317-05	DC CORD (442/332/222)	M
△ F1	2D		F52-0006-05	FUSE(MINI BLADE TYPE)(10A)	
220	2C		G01-2525-04	TORSION COIL SPRING	
221	2D		G01-2710-04	EXTENSION SPRING	
222	2F	*	G01-2737-04	COMPRESSION SPRING	
223	3F		G01-2738-04	COMPRESSION SPRING	
224	2C		G02-1191-03	FLAT SPRING	
-		*	H10-4521-02	POLYSTYRENE FOAMED FIXTURE	
-			H25-0329-04	PROTECTION BAG (280X450X0.03)	
-			H25-0337-04	PROTECTION BAG (180X300X0.03)	
-		*	H54-0504-04	ITEM CARTON CASE (402)	K
-		*	H54-0505-04	ITEM CARTON CASE (442)	M
-		*	H54-0506-04	ITEM CARTON CASE (302)	K
-		*	H54-0507-04	ITEM CARTON CASE (332)	M
-		*	H54-0512-04	ITEM CARTON CASE (202)	K
-		*	H54-0513-04	ITEM CARTON CASE (222)	M
-		*	H64-0539-04	OUTER CARTON CASE (402)	K
-		*	H64-0540-04	OUTER CARTON CASE (442)	M
-		*	H64-0541-04	OUTER CARTON CASE (302)	K
-		*	H64-0542-04	OUTER CARTON CASE (332)	M
-		*	H64-0547-04	OUTER CARTON CASE (202)	K
-		*	H64-0548-04	OUTER CARTON CASE (222)	M
228	1C	*	J21-7630-13	MOUNTING HARDWARE ASSY	

Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
230	2C	*	J21-7651-03	MOUNTING HARDWARE	
231	1C		J54-0071-04	STAY	
233	3E	*	K24-1671-04	KNOB (ATT)	
234	3E	*	K24-1672-04	KNOB (AUD)	
235	3F	*	K24-1673-04	KNOB (AUTO, DISP)	
236	3F	*	K24-1674-04	KNOB (LOUD)	
237	3F	*	K24-1678-04	KNOB (SRC)	
238	3F	*	K24-1679-04	KNOB (RESET)	
239	2F	*	K24-1680-04	KNOB (RELEASE)	
240	2E	*	K24-1681-04	KNOB (EJECT)	
241	2F	*	K24-1682-04	KNOB (FF)	
242	2F	*	K24-1683-04	KNOB (REW)	
243	3F	*	K25-0728-03	KNOB (FM/AM)	
244	3F	*	K25-0729-03	KNOB (1-3)	
245	3F	*	K25-0730-03	KNOB (4-6)	
246	2E	*	K25-0731-03	KNOB (VOL)	
250	1C		N99-1610-15	SCREW SET	
251	1C		N99-1632-05	SCREW SET	
A	1D		N83-3005-46	PAN HEAD TAPTITE SCREW	
C	2C		N30-2608-45	PAN HEAD MACHINE SCREW	
D	2D		N30-3004-46	PAN HEAD MACHINE SCREW	
E	1F		N80-2008-45	PAN HEAD TAPTITE SCREW	
F	2F		N80-2006-46	PAN HEAD TAPTITE SCREW	

## SYNTHESIZER UNIT(X14-5400-XX)

D8		B30-1449-05	LED		
C3 , 4		CK73FB1H821K	CHIP C	820PF	K
C5 , 6		CC73FCH1H150J	CHIP C	15PF	J
C7 , 8		CC73FCH1H470J	CHIP C	47PF	J
C9 , 10		CK73FB1H153KTA	CHIP C	0.015UF	K
C11 , 12		CE04CW1C4R7M	ELECTRO	4.7UF	16WV
C13 , 14		CE04CW1H2R2M	ELECTRO	2.2UF	50WV
C15 , 16		CK73FB1H152K	CHIP C	1500PF	K
C17 , 18		CE04CW1H2R2M	ELECTRO	2.2UF	50WV
C19 -22		CK73FB1C104K	CHIP C	0.10UF	K
C23 -26		CE04CW1C100M	ELECTRO	10UF	16WV
C27 , 28		CK73FB1H122K	CHIP C	1200PF	K
C41		CE04CW1A101M	ELECTRO	100UF	10WV
C42		CK73FB1H103K	CHIP C	0.010UF	K
C43		CK73FB1C104K	CHIP C	0.10UF	K
C44		CK73EB1E154K	CHIP C	0.15UF	K
C45 , 46		CK73FB1H102K	CHIP C	1000PF	K
C47		CC73FCH1H151J	CHIP C	150PF	J
C48		CK73FB1E473KTA	CHIP C	0.047UF	K
C49		CK73FB1H391K	CHIP C	390PF	K
C50		CK73FB1H153KTA	CHIP C	0.015UF	K
C51		* CK73FB1E563KTA	CHIP C	0.056UF	K
C52 , 53		CE04CW1H2R2M	ELECTRO	2.2UF	50WV
C54		CK73FB1H822K	CHIP C	8200PF	K
C56		CK73FB1E683KTA	CHIP C	0.068UF	K
C56		CK73FB1E683KTA	CHIP C	0.068UF	K
C61		* C90-2854-05	ALUMINIUM ELECTROLYTIC C.		
C62		CK73FB1H103K	CHIP C	0.010UF	K
C63 , 64		CE04CW1H010M	ELECTRO	1.0UF	50WV

E: Europe W: Without Europe P: Canada X: Australia  
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(402):KRC-402 (442):KRC-442

(302):KRC-302 (332):KRC-332

(222):KRC-222 (202):KRC-202

△ indicates safety critical components.



## PARTS LIST

\*New Parts

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(X14-5400-XX)

Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
C65			CK73EB1E274K	CHIP C 0.27UF K	
C66			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C67			CK73EB1H823K	CHIP C 0.082UF K	
C68			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C69			CK73FB1E473KTA	CHIP C 0.047UF K	
C71 -78			CK73FB1H153KTA	CHIP C 0.015UF K	
C81 -84			CE04CW1HR33M	ELECTRO 0.33UF 50WV	
C85 -88			CK73FB1H821K	CHIP C 820PF K	
C90			CE04CW1A101M	ELECTRO 100UF 10WV	
C91			CK73FB1H821K	CHIP C 820PF K	
C93 ,94			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C95			CK73EB1C334K	CHIP C 0.33UF K	
C101, 102			CC73FCH1H220J	CHIP C 22PF J	
C104			CK73FB1H331K	CHIP C 330PF K	
C105			CF92V1H394J	MF-C 0.39UF J	
C106, 107			C93-1032-05	CERAMIC 0.10UF K	
C108			CK73FB1H223KTA	CHIP C 0.022UF K	
C109			CE04CW1A221M	ELECTRO 220UF 10WV	
C110			CE04CW1A101M	ELECTRO 100UF 10WV	
C111			CK73FB1H223KTA	CHIP C 0.022UF K	
C112			CE04CW1C100M	ELECTRO 10UF 16WV	
C113			CK73FB1H223KTA	CHIP C 0.022UF K	
C114-116			CE04CW1C4R7M	ELECTRO 4.7UF 16WV	
C117, 118			C92-0009-05	CHIP-TAN 4.7UF 10WV	
C119			CE04CW1C4R7M	ELECTRO 4.7UF 16WV	
C120		*	C90-2855-05	ELECTRO 4700UF 16WV	
C121			CK73FB1H223KTA	CHIP C 0.022UF K	
C122			CK73FB1C104K	CHIP C 0.10UF K	
C123			CE04CW1A101M	ELECTRO 100UF 10WV	
C124			CK73FB1H223KTA	CHIP C 0.022UF K	
C125			CE04CW1A101M	ELECTRO 100UF 10WV	
C126			CK73FB1H223KTA	CHIP C 0.022UF K	
C128			CK73FB1H223KTA	CHIP C 0.022UF K	
C129			CK73FB1E393KTA	CHIP C 0.039UF K	
C130			CE04CW1A101M	ELECTRO 100UF 10WV	
C133			CK73FB1H223KTA	CHIP C 0.022UF K	
C134			CK73FB1H153KTA	CHIP C 0.015UF K	
C201, 202			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C201, 202			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C203, 204			C93-0025-05	CERAMIC 0.22UF K	
C203, 204			C93-0025-05	CERAMIC 0.22UF K	
C205			CE04CW1A330M	ELECTRO 33UF 10WV	
C205			CE04CW1A330M	ELECTRO 33UF 10WV	
C206			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C206			CE04CW1H010M	ELECTRO 1.0UF 50WV	
C209			CK73FB1H103K	CHIP C 0.010UF K	
C210			CE04CW0J220M	ELECTRO 22UF 6.3WV	
C210			CE04CW0J220M	ELECTRO 22UF 6.3WV	
C211, 212			CK73FB1H562K	CHIP C 5600PF K	
C213, 214			CK73FB1H562K	CHIP C 5600PF K	
C213, 214			CK73FB1H562K	CHIP C 5600PF K	
C401, 402			CE04CW1C4R7M	ELECTRO 4.7UF 16WV	
C401, 402			CE04CW1C4R7M	ELECTRO 4.7UF 16WV	
C403, 404			CE04CW0J470M	ELECTRO 47UF 6.3WV	
C403, 404			CE04CW0J470M	ELECTRO 47UF 6.3WV	
Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
C405, 406			CK73FB1H223KTA	CHIP C 0.022UF K	
C405, 406			CK73FB1H223KTA	CHIP C 0.022UF K	
261		2D	E29-1497-04	LEAD PLATE	
CN1			E40-3240-05	PIN ASSY	
CN2			E58-0836-05	RECTANGULAR RECEPTACLE	
CN3			E58-0838-05	RECTANGULAR RECEPTACLE	
J1			E13-0235-05	PHPNO JACK (2P RCA) (302/332)	
J1			E13-0235-05	PHPNO JACK (2P RCA) (202/222)	
J3			E56-0809-05	CYLINDRICAL RECEPTA. (402/442)	
J3			E56-0809-05	CYLINDRICAL RECEPTA. (302/332)	
J4			E13-0446-05	PHONO JACK (4P RCA) (402/442)	
WH1			E39-0090-15	WIRING HARNESS	
L1		*	L33-1045-05	CHOKE COIL	
L2			L40-1001-17	SMALL FIXED INDUCTOR(10UH, K)	
L7			L33-1039-05	LINE FILTER COIL	
L8			L40-1001-17	SMALL FIXED INDUCTOR(10UH, K)	
L11			L92-0308-05	FERRITE CORE	
X1		*	L78-0545-05	RESONATOR (CSB456FB38, AN)	
X2			L77-1163-05	CRYSTAL RESONATOR(4.5M)	
X2			L77-1165-05	CRYSTAL RESONATOR(4.5MHZ)	
A		2D	N83-3005-46	PAN HEAD TAPTITE SCREW	
B		2D	N30-3012-46	PAN HEAD MACHINE SCREW	
G		2D	N80-3010-46	PAN HEAD TAPTITE SCREW	
R1 , 2			RK73FB2A513J	CHIP R 51K J 1/10W	
R3 , 4			RK73FB2A304J	CHIP R 300K J 1/10W	
R5 , 6			RK73FB2A682J	CHIP R 6.8K J 1/10W	
R7 , 8			RK73FB2A751J	CHIP R 750 J 1/10W	
R9 , 10			RK73FB2A622J	CHIP R 6.2K J 1/10W	
R11 , 12			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R13 -16			RK73FB2A101J	CHIP R 100 J 1/10W	
R41			RK73FB2A823J	CHIP R 82K J 1/10W	
R42			RK73FB2A302J	CHIP R 3.0K J 1/10W	
R43			RK73FB2A822J	CHIP R 8.2K J 1/10W	
R44			RK73FB2A154J	CHIP R 150K J 1/10W	
R45			RK73FB2A393J	CHIP R 39K J 1/10W	
R46 , 47			RK73FB2A104J	CHIP R 100K J 1/10W	
R48			RK73FB2A271J	CHIP R 270 J 1/10W	
R49			RK73FB2A823J	CHIP R 82K J 1/10W	
R50			RK73FB2A683J	CHIP R 68K J 1/10W	
R51			RK73FB2A474J	CHIP R 470K J 1/10W	
R52			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R52			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R61			RK73FB2A100J	CHIP R 10 J 1/10W	
R62			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R81 -84			RK73FB2A472J	CHIP R 4.7K J 1/10W	
R85 -88			RK73FB2A303J	CHIP R 30K J 1/10W	
R89			RK73FB2A223J	CHIP R 22K J 1/10W	
R90			RK73FB2A273J	CHIP R 27K J 1/10W	
R91			RK73FB2A104J	CHIP R 100K J 1/10W	
R91			RK73FB2A104J	CHIP R 100K J 1/10W	
R92			RK73FB2A391J	CHIP R 390 J 1/10W	
R93			RK73FB2A751J	CHIP R 750 J 1/10W	
R96			RK73FB2A223J	CHIP R 22K J 1/10W	

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(402):KRC-402 (442):KRC-442

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(222):KRC-222 (202):KRC-202

⚠ indicates safety critical components.

## PARTS LIST

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(X14-5400-XX)


Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
R101			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R102			RK73FB2A512J	CHIP R 5.1K J 1/10W	
R103			RK73FB2A563J	CHIP R 56K J 1/10W	
R104, 105			RK73FB2A472J	CHIP R 4.7K J 1/10W	
R107			RK73FB2A473J	CHIP R 47K J 1/10W	
R109			RK73FB2A473J	CHIP R 47K J 1/10W	
R110			RK73FB2A103J	CHIP R 10K J 1/10W	
R117			RK73FB2A241J	CHIP R 240 J 1/10W	
R118			RK73FB2A103J	CHIP R 10K J 1/10W	M
R119			RK73FB2A103J	CHIP R 10K J 1/10W	
R119			RK73FB2A103J	CHIP R 10K J 1/10W	M
R120			RK73FB2A103J	CHIP R 10K J 1/10W	M
R121			RK73FB2A103J	CHIP R 10K J 1/10W	
R121			RK73FB2A103J	CHIP R 10K J 1/10W	
R121			RK73FB2A103J	CHIP R 10K J 1/10W	M
R128			RK73FB2A913J	CHIP R 91K J 1/10W	
R129			RK73FB2A683J	CHIP R 68K J 1/10W	
R130			RK73FB2A223J	CHIP R 22K J 1/10W	
R131			RK73FB2A104J	CHIP R 100K J 1/10W	
R134			RK73FB2A103J	CHIP R 10K J 1/10W	
R134			RK73FB2A103J	CHIP R 10K J 1/10W	
R136			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R137			RK73FB2A103J	CHIP R 10K J 1/10W	
R138			RK73FB2A472J	CHIP R 4.7K J 1/10W	
R139			RK73FB2A332J	CHIP R 3.3K J 1/10W	
R140			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R141			RK73EB2B223J	CHIP R 22K J 1/8W	
R142			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R143			RK73FB2A473J	CHIP R 47K J 1/10W	
R144			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R145			RK73FB2A392J	CHIP R 3.9K J 1/10W	
R146			RK73FB2A331J	CHIP R 330 J 1/10W	
R147			RK73FB2A221J	CHIP R 220 J 1/10W	
R148			RK73FB2A103J	CHIP R 10K J 1/10W	
R149, 150			RK73FB2A473J	CHIP R 47K J 1/10W	
R151			RK73FB2A273J	CHIP R 27K J 1/10W	
R153			RK73FB2A473J	CHIP R 47K J 1/10W	
R153			RK73FB2A473J	CHIP R 47K J 1/10W	
R155			RK73FB2A103J	CHIP R 10K J 1/10W	
R160, 161			RK73EB2B222J	CHIP R 2.2K J 1/8W	
R162, 163			RK73FB2A103J	CHIP R 10K J 1/10W	
R164			RD14DB2H102J	SMALL-RD 1.0K J 1/2W	
R165			RD14DB2H561J	SMALL-RD 560 J 1/2W	
R168			RD14DB2H2R2J	SMALL-RD 2.2 J 1/2W	
R169			R92-0366-05	CHIP R 560 J 1W	M
R171			RK73EB2B472J	CHIP R 4.7K J 1/8W	M
R172			RK73FB2A103J	CHIP R 10K J 1/10W	
R173			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R174			RK73EB2B472J	CHIP R 4.7K J 1/8W	
R175			RS14DB3A332J	FL-PROOF RS 3.3K J 1W	
R177			RK73FB2A273J	CHIP R 27K J 1/10W	
R183			RK73FB2A393J	CHIP R 39K J 1/10W	
R184			RK73FB2A473J	CHIP R 47K J 1/10W	
R185			RK73FB2A101J	CHIP R 100 J 1/10W	
R186			RK73FB2A562J	CHIP R 5.6K J 1/10W	
Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
R187			RK73FB2A103J	CHIP R 10K J 1/10W	
R188			RK73FB2A182J	CHIP R 1.8K J 1/10W	
R190			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R191, 192			RK73FB2A4R7J	CHIP R 4.7 J 1/10W	
R193			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R194			RK73FB2A473J	CHIP R 47K J 1/10W	
R195			RK73FB2A472J	CHIP R 4.7K J 1/10W	
R196			RK73FB2A222J	CHIP R 2.2K J 1/10W	
R197			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R201, 202			RK73FB2A393J	CHIP R 39K J 1/10W	
R201, 202			RK73FB2A393J	CHIP R 39K J 1/10W	
R207			RK73FB2A220J	CHIP R 22 J 1/10W	
R207			RK73FB2A220J	CHIP R 22 J 1/10W	
R208			RK73FB2A103J	CHIP R 10K J 1/10W	
R208			RK73FB2A103J	CHIP R 10K J 1/10W	
R209			RK73FB2A183J	CHIP R 18K J 1/10W	
R211, 212			RK73FB2A271J	CHIP R 270 J 1/10W	
R213, 214			RK73FB2A101J	CHIP R 100 J 1/10W	
R215, 216			RK73FB2A271J	CHIP R 270 J 1/10W	
R217, 218			RK73FB2A101J	CHIP R 100 J 1/10W	
R401-403			RK73EB2B4R7J	CHIP R 4.7 J 1/8W	
R401-403			RK73EB2B4R7J	CHIP R 4.7 J 1/8W	
R412			RK73FB2A104J	CHIP R 100K J 1/10W	
R412			RK73FB2A104J	CHIP R 100K J 1/10W	
R414			RK73FB2A104J	CHIP R 100K J 1/10W	
R414			RK73FB2A104J	CHIP R 100K J 1/10W	
VR1, 2			R12-0678-05	TRIMMING POT. (10K) (402/442)	
VR1, 2			R12-0678-05	TRIMMING POT. (10K) (302/332)	
VR3			R12-0679-05	TRIMMING POT. (22K)	
W2			R92-2052-05	CHIP R 0 J 1/10W	
W2			R92-2052-05	CHIP R 0 J 1/10W	
W5, 6			R92-2052-05	CHIP R 0 J 1/10W	
D7			UZ-6.2BS(B)	ZENER DIODE	
D9, 10			AM01Z	DIODE	
D9, 10			ERA15-01	DIODE	
D11			DAN202K	DIODE	
D12 -14			1SS133	DIODE	
D15			AM01Z	DIODE	
D15			ERA15-01	DIODE	
D16			RM10ZLF	DIODE	
D17			AM01Z	DIODE (442/332/222)	M
D17			ERA15-01	DIODE (442/332/222)	M
D18			1SS133	DIODE	
D19			UZL-7(L3)	ZENER DIODE	
D20			UZ-5.1BS(B)	ZENER DIODE	
D21 -23			1SS133	DIODE	
D24, 25			UZ-12BS(B)	ZENER DIODE	
D401-407			UZ-6.2BS(B)	ZENER DIODE (402/442/302/332)	
D409-412			DA204K	DIODE (402/442/302/332)	
IC1			* LC72358-9202	MI-COM IC	
IC2			* TDA7420	ANALOGUE IC	
IC3			* BA3917-V4	ANALOGUE IC	
IC4			* TDA7384A	ANALOGUE IC	
IC5			HA12134AF	IC(DOLBY B NR SYSTEM)/302/332	

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(402):KRC-402 (442):KRC-442

(302):KRC-302 (332):KRC-332

(222):KRC-222 (202):KRC-202

 indicates safety critical components.

## PARTS LIST

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Ref.No.	A d d w	N e w	Psrts No.	Description	Dest inati on
Q6			2SC2412K	TRANSISTOR	
Q7			DTC144EK	DIGITAL TRAN. (402/442/302/332)	
Q7			UN2213	DIGITAL TRAN. (402/442/302/332)	
Q8			DTC144EK	DIGITAL TRANSISTOR	
Q8			UN2213	DIGITAL TRANSISTOR	
Q101			DTA144EK	DIGITAL TRANSISTOR	
Q101			UN2113	DIGITAL TRANSISTOR	
Q102			2SK536	FET	
Q103			2SA1037K	TRANSISTOR	
Q104			2SC2412K	TRANSISTOR	
Q105			2SA1037K	TRANSISTOR	
Q106, 107			DTC114YK	DIGITAL TRANSISTOR (402/442)	
Q106, 107			UN2214	DIGITAL TRANSISTOR (402/442)	
Q108, 109			2SB1443	DIGITAL TRANSISTOR (402/442)	
Q110, 111			DTC114YK	DIGITAL TRANSISTOR	
Q110, 111			UN2214	DIGITAL TRANSISTOR	
Q112, 113			2SB1443	TRANSISTOR	
Q114			2SB1184	TRANSISTOR	
Q115			2SC2412K	TRANSISTOR	
Q116			DTC114YK	DIGITAL TRANSIST. (442/332/222)	M
Q116			UN2214	DIGITAL TRANSIST. (442/332/222)	M
Q117			2SB1443	TRANSISTOR (442/332/222)	M
Q118			2SC2412K	TRANSISTOR	
Q119, 120			DTA144EK	DIGITAL TRANSISTOR	
Q119, 120			UN2113	DIGITAL TRANSISTOR	
Q121			2SC2412K	TRANSISTOR	
Q125			DTC144EK	DIGITAL TRANSISTOR	
Q125			UN2213	DIGITAL TRANSISTOR	
Q126			DTA144EK	DIGITAL TRANSISTOR	
Q126			UN2113	DIGITAL TRANSISTOR	
Q127			DTC144EK	DIGITAL TRANSISTOR	
Q127			UN2213	DIGITAL TRANSISTOR	
Q201, 202			DTC143TK	DIGITAL TRANSISTOR	
Q201, 202			UN2216	DIGITAL TRANSISTOR	
Q203, 204			DTC143TK	DIGITAL TRANSISTOR (402/442)	
Q203, 204			UN2216	DIGITAL TRANSISTOR (402/442)	
Q401, 402			DTC144EK	DIGITAL TRAN. (402/442/302/332)	
Q401, 402			UN2213	DIGITAL TRAN. (402/442/302/332)	
Q403			DTA144EK	DIGITAL TRAN. (402/442/302/332)	
Q403			UN2113	DIGITAL TRAN. (402/442/302/332)	
TH1		*	NT732ATD33KJ	THERMISTOR	
TU1		*	W02-1511-05	FM/AM FRONT-END	
<b>SWITCH UNIT(X25-7520-10:402/442 3-10:302/332/202/222)</b>					
270	1E	*	B11-0911-04	OPTICAL DIFFUSER	
271	1E	*	B19-1050-03	LIGHTING BOARD	
D1 -17			B30-1349-05	LED (402/442)	
D1 -17			B30-1395-05	LED (302/332/202/222)	
ED1	1E	*	B38-0640-05	LIQUID CRYSTAL	
PL1			B30-1305-05	LAMP (5.5V .125A) (402/442)	
PL1 , 2			B30-1306-05	LAMP (5.5V .125A) (302/332)	
PL1 , 2			B30-1306-05	LAMP (5.5V .125A) (202/222)	
PL2 , 3			B30-1306-05	LAMP (5.5V .125A) (402/442)	
PL4			B30-1305-05	LAMP (5.5V .125A) (402/442)	


Ref.No.	A d d w	N e w	Psrts No.	Description	Dest inati on
C1			CK73FB1H223KTA	CHIP C 0.022UF K	
C2			CK73FB1H681K	CHIP C 680PF K	
272	1E	*	E29-1491-04	CONDUCTIVE RUBBER	
CN1			E59-0818-05	RECTANGULAR PLUG	
R1 , 2			RK73EB2B471J	CHIP R 470 J 1/8W	
R3			RK73EB2B331J	CHIP R 330 J 1/8W	
R4 , 5			RK73EB2B471J	CHIP R 470 J 1/8W	
R6 , 7			RK73EB2B331J	CHIP R 330 J 1/8W	
R8 -13			RK73FB2A102J	CHIP R 1.0K J 1/10W	
R14 -18			RK73FB2A101J	CHIP R 100 J 1/10W	
R19			RK73FB2A623J	CHIP R 62K J 1/10W	
D18 -23		*	RD6. 2Z	ZENER DIODE	
IC1			LC75852E	MOS-IC	
Q1			DTC144EK	DIGITAL TRANSISTOR	
Q1			UN2213	TRANSISTOR	
Q2			DTA144EK	DIGITAL TRANSISTOR	
Q2			UN2113	TRANSISTOR	
<b>CASSETTE MECHANISM ASSY(D40-1054-05)</b>					
1	2A		A10-2345-08	CHASSIS ASSY	
2	3B		J21-7524-08	MOUNTING HARDWARE (P.B. HEAD)	
3	3B		D14-0630-08	SPRING ROLLER	
4	3B		G01-2613-08	TORSION SPRING (PINCH ROLLER)	
5	3B		D10-2907-08	SLIDER	
6	3B		D13-1102-08	GEAR	
7	3B		J90-0741-08	TAPE GUIDE	
8	2B		J19-4554-08	HEAD HOLDER	
9	2B		J11-0604-08	CLAMPER	
11	3B		D10-2908-08	SHIFT PLATE	
12	3B		G01-2695-08	H.G SPRING	
13	3B		J90-0742-08	WASHER	
15	2B		E39-0059-08	WIRING HARNESS	
16	2B		D10-2752-08	PINCH ROLLER ASSY (F)	
17	2A		D10-2753-08	PINCH ROLLER ASSY (R)	
19	2B		J21-7528-08	MOUNTING HARDWARE	
20	1B		D10-2909-08	SLIDER	
22	3A		D03-0308-08	REEL DISK	
23	3A		D13-1103-08	GEAR	
24	3A		D13-1104-08	GEAR	
25	3A		D13-1105-08	GEAR	
26	3A		D13-1106-08	GEAR	
27	3A		D13-1107-08	GEAR (REV)	
28	3A		D10-2755-08	ARM	
29	3A		A11-0889-08	SUB CHASSIS ASSY	
30	3A		G01-2618-08	COMPRESSION SPRING	
31	3A		D13-1111-08	GEAR	
32	3A		D10-2756-08	ARM	
33	3A		D10-2757-08	ARM	
34	3A		G01-2614-08	TORSION SPRING	
36	3A		D03-0309-08	REEL DISK ASSY	
41	2A		E60-0801-08	CONNECTOR	
43	1B		D10-2758-08	ARM	
44	1A		D10-1346-08	SLIDER	
45	1B		G01-1574-08	TENSION SPRING	

E: Europe W: Without Europe P: Canada X: Australia  
K: U.S.A and Canada M: Without Europe, U.S.A. and Canada

(402):KRC-402 (442):KRC-442

(302):KRC-302 (332):KRC-332

(222):KRC-222 (202):KRC-202

 indicates safety critical components.

## PARTS LIST

\*New Parts

Parts without Part No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

(D40-1054-05)

Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on	Ref.No.	A d d	N e w	Psrts No.	Description	Dest inati on
46	1A		G11-1550-08	CUSHION		157	1B		N09-4059-08	SCREW	
47	1A		G01-2696-08	TORSION SPRING		158	2B		N19-2043-08	FLAT WASHER	
48	1A		J19-4451-08	HOLDER		159	2A		N19-2039-08	FLAT WASHER	
49	1A		D10-2759-08	ARM		160	2B		N24-3020-60	E TYPE RETAINING RING	
50	1A		D10-2768-08	SLIDER		161	2A		N09-4058-08	SCREW	
51	1B		G02-1153-08	FLAT SPRING		162	3B		N19-2050-08	FLAT WASHER	
52	1A		G09-0051-08	SPRING		163	2B		N19-2041-08	FLAT WASHER	
56	2A		D14-0631-08	ROLLER		164	2B		N19-2042-08	FLAT WASHER	
57	2A		D14-0632-08	ROLLER		165	3A		N09-4092-08	SCREW	
58	2A		D10-2747-08	LEVER		166	2B		N09-4060-08	SCREW	
59	2A		G01-2620-08	TENSION SPRING		167	3B		N09-4109-08	SCREW	
60	2A		G01-2621-08	TENSION SPRING		168	3B		N09-4110-08	SCREW	
61	2A		D10-2912-08	LEVER		HD1	2B		T31-0214-08	PLAYBACK HEAD	
64	2B		D10-2769-08	SLIDER		M1	2A		T42-0734-08	MOTOR ASSY	
65	2B		G09-2006-08	SPRING		S1	2A		S62-0813-08	SLIDE SWITCH	
66	2B		G09-2007-08	SPRING		S2	2A		S68-0803-08	PUSH SWITCH	
70	3A		D10-2754-08	ARM		S3	2B		S62-0812-08	SLIDE SWITCH	
71	2A		D13-1109-08	GEAR							
72	3A		G01-2616-08	TORSION SPRING							
74	3B		D01-0605-08	FLYWHEEL ASSY							
75	3B		D16-0606-08	BELT							
77	2A		G01-2619-08	COMPRESSION SPRING							
78	2B		D13-1110-08	GEAR							
79	2B		D15-0909-08	PULLEY							
80	2A		G01-2617-08	TORSION SPRING							
81	2B		D10-2760-08	ARM							
82	2B		N09-4055-08	SCREW							
83	2A		D10-2761-08	ARM							
84	2B		D10-2762-08	ARM							
85	1A		G01-2622-08	TENSION SPRING							
86	3B		D10-2749-08	LEVER							
87	3A		N09-4056-08	SCREW							
88	2A		D10-2763-08	ARM							
89	2B		G01-2623-08	TENSION SPRING							
90	2B		N19-2038-08	FLAT WASHER							
91	1B		G01-2697-08	TENSION SPRING							
92	1B		D10-2913-08	LEVER							
93	1B		D10-2914-08	LEVER							
94	2B		D10-2764-08	ARM							
95	2B		G01-2625-08	TENSION SPRING							
96	1B		D10-2765-08	ARM							
97	1B		G01-2626-08	TENSION SPRING							
98	3B		N19-2035-08	FLAT WASHER							
99	1B		D10-2766-08	ARM							
100	1B		T94-0406-08	SOLENOID COIL							
101	1B		T94-0407-08	SOLENOID							
102	1B		G01-2698-08	TENSION SPRING							
103	2B		D19-0604-08	PIN							
104	2B		G01-2627-08	TENSION SPRING							
150	2B		N09-4009-05	SCREW							
151	3B		N09-4009-05	SCREW							
153	3B		N19-2036-08	FLAT WASHER							
154	2A		N19-2037-08	FLAT WASHER							
155	1A		N84-2003-45	SCREW							
156	1A		N24-3015-60	E TYPE RETAINING RING							

E: Europe W: Without Europe P: Canada X: Australia  
K: U.S.A and Canada M: Without Europe, U.S.A. and Canada

(402):KRC-402 (442):KRC-442

(302):KRC-302 (332):KRC-332

(222):KRC-222 (202):KRC-202

⚠ indicates safety critical components.

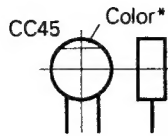
# KRC-202/222/302/332/402/442

## PARTS DESCRIPTIONS

### CAPACITORS

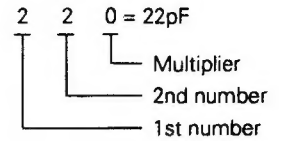
CC 45 TH 1H 220 J  
1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc. 4 = Voltage rating  
2 = Shape ... round, square, ect. 5 = Value  
3 = Temp. coefficient 6 = Tolerance



#### Capacitor value

010 = 1pF  
100 = 10pF  
101 = 100pF  
102 = 1000pF = 0.001μF  
103 = 0.01μF



#### Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

#### Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 -20	+80 -20	+100 -0	More than 10μF -10 ~ +50 Less than 4.7μF -10 ~ +75

#### (Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

#### Voltage rating

2nd word 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	–
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	–
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	–

#### Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J  
1 2 3 4 5 6 7

(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z  
1 2 3 4 5 6 7

(Chip) (B, F)

Refer to the table above.

1 = Type  
2 = Shape  
3 = Dimension  
4 = Temp. coefficient  
5 = Voltage rating  
6 = Value  
7 = Tolerance

#### Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

### RESISTORS

#### Chip resistor (Carbon)

(EX) R K 7 3 E B 2 B 0 0 0 J  
1 2 3 4 5 6 7

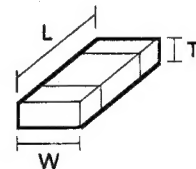
(Chip) (B, F)

#### Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J  
1 2 3 4 5 6 7

- 1 = Type 5 = Rating wattage  
2 = Shape 6 = Value  
3 = Dimension 7 = Tolerance  
4 = Temp. coefficient

#### Dimension



#### Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

#### Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

# KRC-202/222/302/332/402/442

## SPECIFICATIONS

Specifications subject to change without notice.

### FM Tuner section

Frequency range(KRC-402/302/202)	87.9 - 107.9 MHz
(KRC-442/332/222)	87.5 - 108.0 MHz
Frequency step(KRC-402/302/202)	200 kHz
(KRC-442/332/222)	50 kHz
Channel space selection(KRC-402/302/202)	200 kHz(FIX)
(KRC-442/332/222)	50/200kHz(SW)
Usable sensitivity (S/N=30dB)	9.3dBf(0.8 $\mu$ V/75 ohms)
Quieting Sensitivity (S/N=50dB)	15.2dBf(1.6 $\mu$ V/75 ohms)
Frequency response ( $\pm$ 3.0dB)	30 Hz - 15kHz
Signal to Noise ratio (MONO)	75 dB
Selectivity ( $\pm$ 400kHz)	80 dB
Image response ratio	70 dB
IF response ration	120 dB
Stereo separation (1 kHz)	40 dB

### AM Tuner section

Frequency range(KRC-402/302/202)	530 - 1700 kHz
(KRC-442/332/222)	531 - 1611 kHz
Frequency step(KRC-402/302/202)	10 kHz
(KRC-442/332/222)	9 kHz
Channel space selection(KRC-402/302/202)	10 kHz(FIX)
(KRC-442/332/222)	9/10kHz(SW)
Usable sensitivity (S/N=20dB)	28dB $\mu$ (25 $\mu$ V)

### Cassette Player section

Tape speed	4.76 cm/sec.
Wow & Flutter (WRMS)	0.12%
Frequency response	
(KRC-402/442/302/332)(70 $\mu$ S)	30Hz - 16kHz ( $\pm$ 3 dB)
(KRC-202/222)(120 $\mu$ S)	30Hz - 14kHz ( $\pm$ 3 dB)
Stereo separation (1 kHz)	43 dB
Signal to Noise ratio	
(Dolby NR off)	54 dB
(Dolby B NR on)(KRC/402/442/302/332)	63 dB

### Audio Section

Maximum output power	35 W x 4
Full bandwidth power (at less than 1%THD)	20 W x 4
Tone action (Bass: 100 Hz)	$\pm$ 10 dB
(Treble: 10 kHz)	$\pm$ 10 dB
Preout level/Load	1800mV/10k ohms
Preout impedance	600 ohms

### General

Operating voltage	14.4V(11- 16V allowable)
Current consumption	10A at Rated power
Installation size (W x H x D)	182mm x 53mm x 154mm
	7-3/16 x 2-1/16 x 6-1/16 in
Weight	2.9 lbs(1.3 kg)

Note: The specifications and design of this unit are subject to continued technical development and may be changed without notice.

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

#### Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the General market(M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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